

School of Management

**Managing Business Relationships in Uncertainty:
An Indonesian Traditional Banana Supply Chain Study**

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**This thesis is presented for the Degree of
Doctor of Philosophy
of
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DECLARATION

To best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Signature :

Date: February 2016

DEDICATION

This thesis is dedicated to:

My parents

Obeth Banni and Dina Layuk Sugi

To whom I owe my life

ABSTRACT

The study reports on current issues faced by members of traditional banana supply chains that dominate the Indonesian banana industry; i.e., it explores how supply chain members treat and respond to uncertainties around them. In effect, the aims in the study were to identify factors or sources of uncertainties in the banana supply chains; how supply chain members across the network respond to uncertainty; and, how supply chain members manage their B2B relationships to build their competitive advantage.

Comprehensive literature was gathered on the informal economy, supply chain agility, supply uncertainty, relationship marketing management and network theory. Review of the literature on the informal economy shows its increasing importance despite there being few studies on the subject. Supply chain agility was important since agility is the capability needed in responding to the dynamic environment and literature on supply chain uncertainty provided an overview of the sources of uncertainty and strategies to deal with it. The theory of relationship marketing management was used to emphasize B2B relationships, and network theory was included because the focus of the study was the dyads across the network rather than a single firm or dyad. 26 participants selected by snowball sampling from four different islands undertook face-to-face semi-structured interviews. By using a transcription process, translated procedures and Grounded Theory data analysis, a rich body of information provided insight into various reactions of supply chain members.

The study indicates there are three dyads across the supply chain: farmer-collector, collector-wholesaler, and wholesaler-retailer. Result shows that uncertainties are very high due to the high variation of supply and demand, high competition, and the lack of written contracts in addition to the fact that the supply chains operate in informal economy. In response to these uncertainties, supply chain members develop close relationships with their business partners through mechanism such as constant negotiation, toleration, postponed payment, money lending based on verbal promises. These mechanisms allow supply chain members to maintain long-term and reliable business-to-business relationships and thus, allow them to gain competitive advantage. This result shows a how uncertainty is managed in the context of informal economy in Indonesia. The rich body of information and research outcome model emerging from this study not only moved the extant body of knowledge forward but

also can be used to enhance the development of the banana industry in Indonesian particularly, and also the informal economy in general.

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Glory be to the Father, and to the Son, and to the Holy Ghost. As it was in the beginning, and now, and always, and to the ages of ages.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In this chapter, the foundation of the study is presented. This includes the background of the study and refinement of research objectives. The following section describes the Indonesian banana industry in terms of production, marketing and distribution of bananas as they progress through the supply chain activities associated with the business supply chain. Operational definitions are also presented followed by the scope, limitations and delimitations of the study. The significance of the study is addressed, and the content of the next chapter is outlined.

1.2 Background

Modern retailing businesses such as supermarkets and hypermarkets have developed rapidly in transitional economies (Maruyama & Trung, 2007; Reardon & Berdegue, 2002). In Vietnam, the number of supermarkets has increased significantly from only 12 in 6 cities (1995) to 210 supermarkets in 30 cities (Maruyama & Trung, 2007). In Indonesia, it was reported that supermarkets went from a very small base of primarily upper income consumers to currently account for more than 30% of total food sales (Reardon, Timmer, Barret, and Berdegue, 2003). Recent data show that from 2007 to 2011 the number of modern retail outlets in Indonesia increased 17.57% every year; from 10,365 outlets in 2007 to 18,152 in 2011 (Indonesian Commercial Newsletter, 2011).

The increasing number of modern retailers such as supermarkets provides an attractive alternative for banana farmers because supermarkets offer higher returns for superior quality produce. According to Balsevich et al. (2007), growers' returns from selling to supermarkets were 50% higher than those achieved from traditional markets. Farmers can supply supermarkets directly, or indirectly through growers associations, traders, wholesalers or consolidators (Balsevich et al., 2007; Bignebat, Koc, & Lemeilleur, 2009).

Nevertheless, from supermarket procurement practices there are also negative impacts which affect smallholder farmers. Increasing concerns by supermarkets regarding food safety make it hard for smallholder farmers to comply with the new safety standards because of their lack

of capital or the availability of credit; e.g., the expectation that they will install safe water systems, toilets, hand-washing facilities and cement storage-houses (Berdegue et al., 2003). Furthermore, farmers associations face the difficulty of complying with the supermarkets' strict regulations in terms of product consistency, product uniformity and financial arrangements (Balsevich et al., 2007; Reardon & Berdegue, 2002). Consequently, smallholder farmers are constantly at risk of rejection from modern retailers.

Several studies (e.g., Chen, Shepherd, & Silva, 2005; Reardon & Berdegue, 2002) have suggested that supermarket procurement systems need to assist in providing opportunities to improve traditional marketing systems, but the affect of supermarket procurement systems on the traditional markets is still unclear. Therefore, investigation is needed into how modern supply chains are able to influence traditional supply chains within the banana industry in Indonesia.

1.3 Research questions

The major research question in this study is "How transacting with modern retailers promotes changes in traditional food marketing chains?" In order to understand the influences of modern banana supply chains on traditional banana supply chains, in this study there will be an examination of the implications of modern retailers' procurement practices on traditional banana retailers and of how members of traditional banana and processed-banana supply chains adapt to the demands of modern banana marketing systems.

Accordingly, the minor research questions are:

1. What procurement strategies are employed by modern retailers?
2. How do procurement systems of modern retailers impact on the members of the supply chains?
3. How do supply chain members adapt to the demands of modern retailers?
4. What factors prevent supply chain members from responding to the needs of modern retailers?

1.4 Refinement of research questions and objectives

It was considered appropriate to undertake a series of open-ended interviews with two modern retailers, two suppliers to the modern retailers and one traditional retailer. Based on preliminary discussions with members of banana supply chain, it was noticed that although modern retailers procure bananas from traditional retailers, the volume of banana is very

small, about 15 to 20 hands (see p. 13) every two days. In addition, the modern retailers indicated that the products they procure from traditional markets are only complementary items; i.e., the quantity of bananas procured in this way was not significant to their total fruit sales.

Furthermore, it appeared that several modern retailers procure bananas of an exclusive variety, viz., Cavendish, which is not sold through use of a conventional or traditional supply chain, but rather through closed and integrated chains that are organized by two specific multinational companies. As these multinational companies are the only Cavendish suppliers in the country, they are responsible for the supply of Cavendish bananas to modern retailers across the country. Also, since modern retailers buy bananas from traditional markets in very small quantities, the provision of Cavendish bananas does not appear to have any impact on the members of traditional supply chains; i.e., it was concluded that there was no spill-over effect. In other words, there was very little to no impact of modern retailer's procurement system on traditional retailers.

On the other hand, initial discussions raised two important suggestions. Firstly, a person who exclusively supplies Cavendish to modern retailers indicated that the Cavendish distributor was experiencing a change in their distribution line; viz., by being in the process of introducing Cavendish bananas to traditional markets. The observation was that there was an increasing demand from traditional retailers and wholesalers for Cavendish. Thus, there was developing a partnership between the Cavendish distributor with traditional wholesalers or retailers to establish a new brand for Cavendish bananas for traditional retailers as opposed to modern retailers.

Secondly, initial discussions with traditional retailers and farmers revealed that they were undergoing what they called a change; the suggestion being that there was a general decrease in the number of bananas traded along the supply chains due to production uncertainties. This decrease was considered to make it more difficult for traditional retailers to source bananas.

To follow up the ideas noted in the initial discussions, together with the identified research questions, it was decided to create a set of questions that could form the basis of the study. A questionnaire was determined to be a method for collecting both quantitative and qualitative data on how agile supply chains are in relation to the changes around them and to how agile

their strategies may be to impact positively on their performance. The questionnaire components could be employed to measure not only the agility of the supply chain, but the behaviours of the supply chain members.

Consequently, attempts were made to gain access for interviews to a Cavendish producer, a Cavendish distributor and supermarket businesses through formal letter and verbal communication. However, after waiting for several months, none of these efforts were successful because the companies of the Cavendish banana supply chain were very strict and unwilling to release information for a study regarding their partnerships or business companies and partnerships. Therefore, the opportunity to examine the original Research Question was not available.

On the other hand, the researcher's attempts to gain access to the members of traditional supply chains (retailers, wholesalers, collectors and farmers) was more successful and, by comparison, relatively easy. Once good contact was established between the participants and the researcher through an informal introduction, the participants openly and freely provided the information needed. Thus, the researcher determined to focus the study on the traditional banana supply chain (i.e., of non-Cavendish bananas).

Regarding the traditional banana supply chain, as previously mentioned briefly, the current concerns that members of the banana supply chains face are those of a decreasing volume of banana and an uncertain supply of products due to production issues. Generally, uncertainty is a situation when someone doesn't know what is going to happen next and s/he doesn't know what the possible distribution or outcome is likely to be. Historically, Keynes (1937) refers to uncertainty as the state when we cannot distinguish for certain what is known and what is only probable because there is no scientific basis to form calculable probability; therefore, we simply do not know the probability. Thus, uncertainty refers to an unknown probability and impact of an event that occurs. Because the impact is associated with gains and/or losses, uncertainty can bring negative and/or positive consequences (Douglas, 1992).

Because of the various links which occur along a supply chain, uncertainty is inherent in the movement of products. It can come from internal or external aspects of the supply chain (Fisher, 1997; Rodrigues et al., 2008; van Donk & Vaart, 2005). In addressing such uncertainties, a supply chain needs to encourage and ensure as close a relationship as possible among successive members of the supply chain. Such a relationship facilitates the

coordination processes and provides a unique opportunity to help chain members to manage operational and environmental uncertainties inherent in a supply chain network (Manuj & Mentzer, 2008). The coordination requires the development of a trusting atmosphere to allow for the flow of strategic information from both seller and buyer to improve asset management, increase resource control, enhance the flexibility process, reduce costs and, thereby, reduce uncertainty (Fawcett, Jones, & Fawcett, 2012; Klein & Rai, 2009).

The second point raised in initial discussions with members of a local supply chain was the decrease in volume of banana. The implication is that there is increasing competition in the market, particularly in the supply market, as the members of the supply chain expressed increased difficulty in sourcing bananas. In line with this, previous researchers have noted that competition is increasing across industries and the mode of competition has now shifted from competition among firms to competition among supply chains (Boehlje, 1999; Hunt & Arnett, 2006).

The capability in a supply chain to address competition, as well as uncertainties, reflects the agility of the supply chain within the industry. Agility is defined as taking advantage of every opportunity in a volatile market to make a profit by using market knowledge and virtual co-operation (Naylor, Naim, & Berry, 1999). Agility is viewed as an important determinant of success in a competitive environment (Roberts & Grover, 2012) and is related to assisting a supply chain to gain competitive advantage.

Competitive advantage refers to the ability to use resources to perform better than others in the same industry or markets (Porter, 1985). To gain competitive advantage in the marketplace, firms develop collaborative long-term buyer-seller relationships with other firms to achieve goals that would not easily attain by acting alone (Mohr & Spekman, 1994). This is in line with Claycomb and Frankwick (2010) who also relate competitive advantage to relationships. They not only relate competitive advantage to relationships but to low uncertainty as well. They maintain that low levels of uncertainty encourage buyers to be more confident in their relationships with their suppliers and thus, create competitive advantage that other supply chains do not enjoy (Claycomb and Frankwick, 2010).

Bananas are a perishable product with a short shelf life. The traditional banana supply chains are generally not equipped with cold storage or refrigerated transportation vehicles to keep the perishable products on the required level of quality and quantity at the final delivery

(Bogataj, Bogataj, & Vodopivec, 2005; Obeth & Dunne, 2007). Consequently, such supply chains are required to be agile and responsive in order to reduce lead time and, potentially, allow for just-in-time delivery (Naim and Gosling, 2011). Such supply chains are sustained by the quality of relationships between supplier and customer (Naim & Gosling, 2011; Spekman, Kamauff, & Myhr, 1998).

Based on the above preliminary experiences, the research problem of the current study was modified. The new major research problem is: “How do members of a supply chain manage their relationships in response to uncertainties?” The research problem, then, was broken down into three objectives:

1. To identify the sources of uncertainty in Indonesian banana supply chains,
2. To identify how supply chain members respond to uncertainties, and
3. To identify how supply chain members manage their relationships to build competitive advantage.

In order to address the three objectives in this study, six research questions were set:

Objective One:

1. How do members in the traditional supply chain perceive uncertainty?
2. What factors lead to uncertainty in the traditional banana supply chain?

Objective Two:

3. What strategies do members develop to cope with uncertainty?
4. How do members develop or gain necessary resources to develop these strategies?

Objective Three:

5. How do members manage their business-to-business relationships?
6. How does relationship management allow members to build competitive advantage?

In this study, the focus will be on members of traditional banana supply chains which include farmers, collectors, wholesalers, and retailers. In regards to retailers, not only traditional retailers, but also modern retailers such as supermarkets buy local bananas produced by farmers. However, modern retailers are excluded based on two main reasons. The first reason is the very limited access to modern retailers. Out of eight modern retailers visited, five were unwilling to participate and three, although they welcomed interview, they were unwilling to share information needed for this study. The second reason is the low

contribution of local bananas to the modern retailers' sale. In general, the contribution of local bananas to the sale of these modern retailers is less than 2%. Therefore, it is decided to focus only on traditional retailers.

1.5 Indonesian banana industry

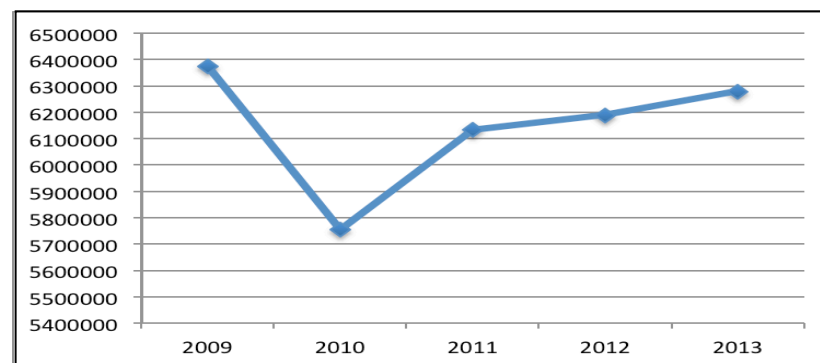
The agricultural sector plays an important role in the Indonesian economy. It contributed 15% of the total gross domestic product (GDP) in 2014. The agricultural sector includes crops, livestock, forestry and fisheries. The crops alone contributed around 9% of the total GDP in 2014 (Statistics-Indonesia, 2009a). The banana industry is an important part of Indonesian agriculture; the 2003 agricultural census survey reported that there were 16,000,000 households involved in banana industry (Statistics-Indonesia, 2003). The 2013 agricultural census reported there are 5,000,000 households grow banana trees. This number makes up 50% of horticultural households and 19% of all agricultural households which include food crops, horticulture, plantation, animal husbandry, fishery, and forestry (Statistics-Indonesia, 2013b). It is no surprise that banana can be found everywhere because it is marketed as a non-seasonal fruit; it bears fruit in a short period of time and it is relatively easy to grow. It grows well in lowland and highland and in either a wet or dry climate.

Banana is a staple fruit in Indonesia. People grow banana in large plantation sites for commercial use, as well as in the backyard of their home for daily consumption. There are more than 20 varieties of banana grown in Indonesia. Based on its utilization, banana trees are divided into four groups. The first group consists of varieties that can be eaten fresh such as Ambon banana, Susu banana, Raja banana, Cavendish banana, Mas banana, and Barangan banana. The second group includes varieties that normally are eaten after being cooked; e.g., Kepok banana, Tanduk banana and Nangka banana. The third group consists of varieties that contain seeds and are not normally used for consumption, such as Klutuk banana and Batu banana; people grow these types of banana for the leaves. The last group includes banana grown for the fibre trade, such as Manila banana (Direktorat Pengolahan dan Pemasaran Hasil Hortikultura, 2005).

Banana is considered a superior product in Indonesia because it contributes 30-40% of the total national fruit production (Direktur Budidaya Tanaman Buah, 2008). Banana production always has been the highest among all kinds of fruit. For instance, in 2011, banana production was 6.1 million tonnes followed by mango with 2.1 million tonnes, orange with

1.8 million tonnes, mandarins with 1.7 million tonnes and salacca 1 million tonnes. Later, in 2013, total banana production was 6.2 million tonnes, followed by mango with 2 million tonnes and orange 1.4 million tonnes (Statistics-Indonesia, 2012, 2013a). The production of the remaining kinds of fruit amounts to less than one million tonnes whereas banana production remains relatively high. Figure 1.1 shows the production of banana in the last five years. The total production of banana is about three times higher than the second most popular fruit which is mango. Central production of banana is distributed across the country with Java as the main producer; it contributes 63% of the total banana production nationally (Direktur Budidaya Tanaman Buah, 2008).

Figure 1.1. Production of Banana (Tonnes), 2009-2013



Banana is used extensively in Indonesia; it is consumed fresh and can be processed to produce banana chips, dried banana and banana jam. It is used also in cooking and baking to make banana cake, banana bread and various kinds of dessert. Besides food, the side product of banana has had a positive contribution to development in other industries. For instance, banana peel can be used in producing banana peel chips or extracted for its potency in preventing and curing cataracts (Mahmudah, Lintang AS, Winant F., & Triana F., 2013). The hump of the banana tree can be used to produce bio-ethanol (Utami, 2013) and the fibre of the tree to make fabric sheets (Maimunah, 2006).

By comparison with other fruit crops, bananas are far more popular to grow because: (1) banana plants can grow in any agro-ecosystem, (2) the market demand of banana is still high, (3) banana can be produced all year round, (4) there are many varieties and sub-varieties of banana with various uses both as fresh or processed food and (5) banana farming allows a grower to gain a relatively high profit within a short period of one or two years (Hadi, 2009).

1.5.1 Banana production

The climate and soil in Indonesia are suitable to produce high quality banana. However, production is still low due to two main technical factors; viz., lack of farm management and inconsistent treatment of banana diseases (Badan Litbang Pertanian, 2005). Farmers manage their banana farms traditionally with infrequent use of agricultural inputs such as fertilizers and pesticides, little to no weed control, absences of fundamental banana cultivation such as pruning and fruit protection, uncontrolled minimal numbers of stems per plant, and a lack of post-harvest treatments. Farmers are unable to manage their banana farms correctly, or to a higher standard, because they do not have enough money to do so. Banana trees are generally not difficult to grow and to maintain. In addition to that, workshops on farm management or introduction to latest agricultural inputs are often provided free by the local agricultural extensions to equip farmers with necessary knowledge to improve the quality of their bananas. However, having the information on how to improve the quality of yield does not necessarily mean that farmers can apply the knowledge; due to farmer's lack of finance, they may not be able to afford to buy the needed inputs. Banana farming is characterized by a lack of innovation technology because the majority of bananas are grown in small-scale fields of 0.5 to 2 hectares with minimal inputs and distribution. This results in relatively low quality yields, low productivity and a high degree of waste (Badan Litbang Pertanian, 2005).

The second cause of low production is that increasing banana diseases affect banana farms across provinces in Indonesia. Blood disease bacterium (BDB) and banana bunch top virus (BBTV) are two of the common causes. They infect fruits when they are ready to harvest. Blood disease bacterium was first observed in 1910 in Sulawesi Island and has caused serious damage to the banana industry ever since. For instance, it was reported in the early 1900s that the shipping of 900,000 bunches of bananas to Makassar (the capital city of South Sulawesi) was completely stopped due to the disease. Later, in 1991 to 1993, it caused the sudden death of over 1000 ha of commercial banana plantations in Northern Sumatra Island and, in 1999 it is reported to have damaged banana plantations in Papua Island (Davis, Fegan, Tjahjono, & Rahamma, 2000; Machmud, 1985; Semangoen, 1971). These reports show that, although the disease has been identified for more than 90 years, there has been no effective treatment to eradicate the disease. In other words, it remains a dangerous threat to banana plantations.

Another disease, caused by *Fusarium Oxysporum* f. *Sp* *Cubense* (FOC) is considered the deadliest disease to banana. It easily infects, quickly spreads and withers banana trees until

they finally die (Tukan, Roshetko, Budidarsono, & Manurung, 2006; Velez, 2007). This disease has decreased the productivity of banana, although the total production numbers have increased. The *Fusarium* pathogen has destroyed more than 5,000 hectares of commercial plantation and about 8,000 hectares of traditional plantation (Daryanto, 2002; Nasir & Jumjunidang, 2003). Production figures for 2008-2009 shows banana production has increased from 6 million tonnes in 2008 to 6.3 million in 2009 before falling slightly to 6.1 million in 2011. In contrast, productivity continuously fell from 111.69 in 2008 to 55.58 in 2013 (Statistics-Indonesia, 2012). This means the increase in total yield is caused by the growing size of banana fields rather than the productivity of the fields. While the productivity of bananas fell because of diseases in the banana crops, the national production is supported by an increasing number of people growing bananas.

Generally, the quality of banana produced by farmers is considered to be low. According to Direktorat Jenderal Hortukultura (2008), a good quality of banana accounts for only 10% – 20% of the total banana produced by farmers. The main reasons for this are inadequate cultivation and poor post-harvest methods used by farmers, which are coupled with a lack of capital that forces farmers to harvest them before they reach the stage of maturity (Hadi, 2009).

In addition to about 20 varieties of banana across the islands, the climate and soil characteristics in each island are not the same; thereby creating challenges for supply chains across the islands. Banana planting is done traditionally, based on the farmers' experience, which means that production may vary highly in terms of quality, size and variety. In her study on patterns of predation by banana weevil in Indonesia, Abera-Kanyamuhungu (2005) found that farm management practices such as weeding, mulching and intercropping are highly variable within and between banana fields.

Banana production entails uncertainty in terms of yield and price; this impacts on related business sectors such as food processing. In her study on business analysis of banana chips production, Diniarti (2009) found that banana chip processors constantly face uncertainty of raw products in regards to procurement price and quantity which automatically affects banana chip production and selling price.

1.5.2 Markets for banana

Bananas are marketed domestically and internationally. The domestic demand for banana is high and it is predicted to increase. According to the Statistic Bureau, the average banana consumption per person is 8.84 kg per year. The Indonesian population is predicted to reach 255 million people in 2015 and 271 million in 2020. These numbers are predicted to increase every year. It means in 2015, domestic demand for banana will be 2.2 million tonnes and it will increase to 2.4 million tonnes in 2020 (Statistics-Indonesia, 2009b). At the same time that the population grows, the demand for banana will increase.

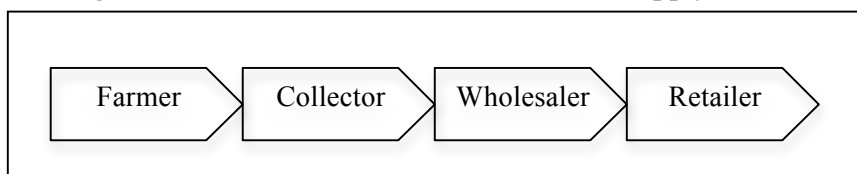
The international market for Indonesian banana is still immature. The only variety exported so far is limited to Cavendish; it is exported only to Hong Kong, Japan, Singapore, Middle East countries and China (Mesra, 2002). However, there is a growing effort to export other varieties; e.g., Barangan and Mas (Badan Litbang Pertanian, 2005; Direktorat Pengolahan dan Pemasaran Hasil Hortikultura, 2005). The export volume from Indonesia is far behind countries such as Thailand or Vietnam. Although demand from the international market is high, exporters struggle to keep up the export volume due to the impact of *Penyakit Layu Fusarium* (Panama diseases) and blood diseases (Badan Litbang Pertanian, 2005; Direktorat Pengolahan dan Pemasaran Hasil Hortikultura, 2005; Firdaus & Silalahi, 2007) (Badan Litbang Pertanian, 2005). In addition to fresh banana, Indonesia also exports processed bananas to countries such as Japan, Malaysia, USA, Netherlands, Singapore, Saudi Arabia and Australia (Firdaus & Silalahi, 2007).

1.5.3 Distribution of banana

Bananas are distributed through various channels. Banana supply chains are classified based on the type of partnership that farmers have with the buyer (Direktorat Jenderal Hortikultura, 2008). In the first type, product distribution is conducted through a partnership between a farmer and a trading company that organizes fruit distribution to a domestic modern market or to export to other countries. This chain is shorter than the traditional chain. As such, this type depicts an integrated chain. An integrated supply chain is often referred to as a modern supply chain. In contrast to a traditional chain where bananas are transported with a minimum of value-added activities, bananas in modern supply chains are treated according to certain requirements to satisfy the customers. These treatments include the order of a specific variety, washing, packaging and a designed transportation system. Currently, the only variety of banana distributed through an integrated modern supply chain is Cavendish (Direktorat Jenderal Hortikultura, 2008; Velez, 2007).

The second type, the subject of the current study, is referred to as a traditional supply chain in which farmers are not involved in any partnership with consumers. The traditional supply chain dominates the Indonesian banana industry. In this type of supply chain, a farmer can sell his bananas directly to a local retailer in a traditional marketplace or to local banana traders. Traditional chains are interlinked with each other because chain members have the option to trade with multiple sellers and buyers. It is common, for instance, for a collector from one supply chain to buy bananas from a collector in another chain. Generally, the members of traditional banana supply chains are farmers, collectors, wholesalers and retailers (Figure 1.1.) ; these members constitute three major relationship dyads of farmer-collector, collector-wholesaler and wholesaler-retailer. The dyads in a traditional banana supply chain tend to operate in an informal economy. That is to say, they are not registered and do not have any obligation toward the government such as paying taxes; their business activities are marked by the absence of written rules and formal interactions (Direktorat Jenderal Hortikultura, 2008).

Figure 1.2. Members of Traditional Banana Supply Chains



The farmer's role is that of the producer of banana. Farmers can sell their bananas directly to collectors or through agents of a farmers' organisation. Some of these farmers do not own land; rather, they work on someone else's property because they do not have enough capital to buy land of their own (Direktur Budidaya Tanaman Buah, 2008).

The second member, the collector, is like a middleman who acts as a trader to link the products from the farmer to the market. The collector's role is to collect bananas. Generally, there are two levels of collectors; a village collector (one who collects bananas from farmers around the village) and a sub-district collector (one who receives bananas from a number of village collectors or directly from farmers). Collectors generally sort and grade the bananas they receive, as well as distribute bananas to various local or inter-island buyers according to the demand for the product. As such, a collector acts as a banana distributor (Direktorat Jenderal Hortikultura, 2008; Direktur Budidaya Tanaman Buah, 2008; Tukan et al., 2006).

The wholesaler is the one who receives banana from collectors. Wholesalers own banana in larger quantities because they usually buy bananas from more than one collector. While collectors do not sit in the market, wholesalers do. Wholesalers are located in the wholesale markets. At the wholesaler level, banana is again sorted and graded to match the standard requirements of customers (Direktur Budidaya Tanaman Buah, 2008).

Retailers constitute the chain member closest to the end customers/consumers. Retailers in banana supply chains include modern retailers (supermarkets and hypermarkets) and traditional retailers in fruit shops or wet markets. Wet market retailers purchase bananas from a wholesaler or collector while a modern retailer purchases from a wholesaler or wet market retailers (Obeth & Dunne, 2008).

The standard four terms used to describe members of a traditional banana supply chain can sometimes become confused; in some places in Indonesia variations of terminology can appear. For example, a trader can be a collector, a wholesaler or an exporting agent. Exporting agents deal with exclusive customers such as modern retailers or foreign buyers. They may purchase bananas from collectors who buy bananas from farmers who have their own banana plantation or from a farmers' association (Direktur Budidaya Tanaman Buah, 2008).

In some provinces, middlemen have an important role in the banana supply chain. Besides trading, middlemen may play a mixed role as channel manager, information supplier, co-investor and extension officer. With such roles, middlemen can encourage farmers to produce good quality banana and improve their competitiveness (Kono & Goto, 2002; Woods, Wei, Singgih, & Adar, 2000). However, in the current study, the four standard terms for banana supply chain members are used.

The distribution of banana is marked by the lack of cold-stores, poor infrastructure and rough handling which contribute substantially to distribution disruption and high volatility (Obeth, 2007; Singgih & Woods, 2003). Furthermore, Arvitrida et al. (2010) observe that infrastructures are fragmented and, potentially, cause delays in various activities such as post-harvest handling, packaging, storing and transportation. These delays disturb the flow of product along the supply chains which can lead traditional supply chains to being unable to match demand with supply. Thus, the uncertainty in delivery of the product can lead to uncertainty in relation to total performance.

1.6 Operational definitions

Agility

In this study, agility refers to the ability of supply chain members to respond to the uncertain changes that arise in their environment.

Banana

The earlier explanation has distinguished the variety of banana distributed along modern and traditional supply chains. Since the focus in this study is on banana distributed through wet markets, from this point onward, the term banana refers to all varieties of local bananas, excluding the Cavendish variety.

Banana supply chain

Review of the Indonesian banana industry shows that a banana supply chain can be categorised into two groups based on the type of product and retailer; viz., the modern and traditional supply chain. Since the study will focus on the traditional supply chain, from this point onward the term 'banana supply chain' will be used to refer to a traditional banana supply chain.

Banana bunch and banana hands

Banana bunch is the whole bunch of banana freshly cut from a banana tree. Banana hands are parts of a banana bunch. A banana bunch can consist of seven to ten hands. In banana transactions, bananas are delivered physically in bunches but are valued based on the total number of hands.

Collector

A collector is a person who buys bananas from farmers irrespective of the volume of transaction with each farmer.

Farmers

A farmer is a person who produces bananas irrespective of the contribution of banana to the farmer's total income.

Informal economy

In this study, informal economy refers to economic activities that are not governed according to the laws and regulations, which characterize large or formal institutions (Webb et al., 2009).

Power structure

Power structure refers to how the supply chain members perceive dominance in their B2B relationships.

Supply chain competitive advantage

In traditional banana supply chains, competitive advantage refers to the factors that makes supply chain members feel competitive to their competitors.

Retailer

The term ‘retailer’ refers to the person who retails bananas in wet or traditional markets.

Uncertainty

Uncertainty is defined as a condition in which the probability of future events is unpredicted (Gaur, Mukherjee, Gaur, & Schmid, 2011). Although one can list the events that might happen in the future, he has no idea which event will actually happen.

Wholesaler

A wholesaler is a person who buys bananas in large quantity from a collector.

1.7 Study scope and delimitations

1.7.1 Scope

The scope of this study is taken to be the business-to-business relationships between members of banana supply chains. Thus, it specifically focuses on dyadic relationship between the members. The supply chains studied are located in four different islands: Kalimantan, Sulawesi, Sumatera, and Java. This is done to ensure the diversity of data.

1.7.2 Delimitations

The purpose in this study is to explore the relationship in a traditional Indonesian banana supply chain to gain a deep understanding on how the members of the chain respond to the dynamic environment due to uncertainty, how their actions affect their relationships with business partners and lead to a successful business outcome. The intention is to identify variables that influence dyadic relationships in the supply chain rather than quantitatively measure the variables precisely. Given the current lack of detail as to member relationships in the supply chain and the relatively small number of research participants, it is considered that the body of knowledge can be forwarded by in-depth interviewing. As such the current study is qualitative in nature.

1.8 Significances of the study

The study contributes to the overall perspective of relationship marketing management in an informal economy. In response to dynamic markets, many of the studies on relationship marketing management have been conducted in the context of formal economies; there is a dearth of research for the informal economies. The role of informal economies has increased due to its impact in combating poverty, particularly in developing countries (ILO, 2007a, 2007b). However, although the academic concept of the informal economy was introduced over 40 years ago, it has occasioned limited discussion prior to the recent 2007 global financial crisis where informal economies showed high resilience (Horn, 2011).

The Indonesian banana supply chain is dominated by traditional management practices that make the supply chain activities vulnerable to any changes or disruptions, both external and internal. However, the existing chain management has stood for many years showing that it has its unique way in responding to uncertainties. Therefore it is the appropriate industry to be studied in order to understand relationship management of supply chains within the context of an informal economy. Thus, the study will make a contribution to understanding, and potentially ideas for improving, informal economies.

Previous research on Indonesian banana supply chains has focussed heavily on supply chain coordination. This included assessment of the financial flow to farmers (Kuntarsih, Kustiati, Iswari, & Dimiyati, 2007), the constraints within the supply chains such as lack of capital, small scale farming, simple technology (Setyajit et al., 2003), the type of coordination in dyad relationships along the chains (Obeth & Dunne, 2008), the cultural impact on the

supply chain transactions (Singgih & Woods, 2004), and how to improve farmers' linkages to market (Tukan et al., 2006). These studies have not used the concept of relationship management to integrate the supply chain management, particularly in responding to uncertainties. Therefore, this project will add to the literature of relationship management in coping with uncertainty and, along with it, will add to the literature of relationship management within Indonesian banana supply chains.

This study will contribute to understanding of uncertainty challenges in business-to-business relationships (B2B) in the context of informal supply chains. B2B relationships are vulnerable in general and more so in the context of informal supply chain. As such, the traditional supply chains, being a stable supply chain with long-term B2B relationships, they are not formally regulated or controlled and therefore, uncertain at the same time.

Thus, the focus on the traditional supply chain relates to how a traditional supply chain in an informal economy can address market uncertainties; not much discussed previously. In informal economy, traders are subject to the regulations bound and legally bound by formal contract to each other. They carry their business activities according to a set of formal agreement. These forms of binding allow them to reduce the unwanted risks of uncertainty. On the other hand, traders in informal economy do not have such mechanism. Inevitably they are more vulnerable to unwanted risks of uncertainty. The distinct characteristics of formal and informal economies signify different degrees of uncertainties and different strategies in addressing them; this study, then, can contribute to the theory of supply chain flexibility/agility particularly in regards to informal economies.

As for managerial significance, this study will provide valuable insights into understanding the true nature of business relationships in informal supply chains and thus, allow new or existing members from banana supply chains or even other supply chains operating in a similar context to improve their relationships in a way that allows them to have stable relationships. Meanwhile, the insights developed from this study will be a valuable reference to new or existing members of Indonesian banana supply chains in order to develop survival strategies in uncertain environment.

1.9 Conclusion

This chapter has described the changes in research objectives which have underpinned this study. The refinement of an important research problem and questions signifies the value of the study as it reflects the actual issues faced by the members of traditional supply chains. Despite the emphasis on the banana supply chain suggesting some limitations, the study can be a substantial contribution to improving business-to-business relationships in the informal economy, the literature of Indonesian banana supply chains in general, the theory of supply chain agility and relationships among members of supply chains.

In the next chapter, a review of extant literature relevant to the current study will be reported on and a hypothetical model developed as a precursor to the development of a specific research interview schedule.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter the theoretical background of the study is introduced; it is divided into four sections. Each section represents the theories underlying the topic of the study. The first section is used to describe the increasingly important role of the informal economy. In the second section, the theory of relationship management is discussed. The concepts of network structure and power relationships comprise the third section. The final section is used to provide current insights concerning uncertainty in the supply chain network and related strategies designed to mitigate those uncertainties.

2.2 Informal Economy

Informal economies consist of economic activities conducted outside the boundaries of formal institutions yet remain within less formal boundaries of a society. As such, informal activities are considered less legal in the sense that they are not governed according to the laws and regulations which characterize large, formal institutions. Nevertheless, informal economy activities are legitimate because the products, methods and practices of an industry are accepted by certain social groups (Webb, Tihanyi, Ireland, & Sirmon, 2009). From the macroeconomic perspective, Restrepo-Echavarria (2014) defines the informal economy as market-based activities which are not taxed or registered by the government.

The legitimacy of informal economies may be justified by three notions; pragmatic, moral and cognitive. Pragmatic legitimacy is associated with the benefit of an informal activity to a certain group, moral legitimacy reflects positive normative evaluation of the informal activity and cognitive legitimacy relates to increased public understanding of the informal activities which lead to normalization of activities that were previously considered illegitimate (Suchman, 1995). In other words, activities in the informal economy are much governed and regulated according to the beliefs and norms of a given society.

The notion of informal economy is relevant and the interest to it growing not only in poor and developing countries but in industrialized or developed countries. In developing or poor countries, the informal economy thrives because it reduces the unemployment rate, improves

the life of the poor and provides opportunities for those unable to join the formal economy because the barrier to entry is high due to overly bureaucracy or corrupt government regulatory procedures (Hobson, 2011). In industrialized or developed countries, factors such as the increased burden of taxation and intensity of regulations are main factors making people prefer to engage in the informal economy (Schneider, 2002). Based on his empirical study in 110 countries, Schneider (2002) found that the average informal economy GDP in all countries is 40% and productivity in the informal economy is higher than in the formal economy. Schneider's (2002) study implies that the informal economy is becoming more attractive since the participants do not have to pay substantial taxes and they do not have to bear increased costs as the consequences of regulations. As for developing and poor countries, reflection on Hobson's study (2011) suggests two things; (1) small businesses with low capital can only participate in the informal economy and (2) the informal economy has an important role in supporting the nation's economy.

Investigations into the informal economy now have become more intense due to four main drivers: (1) rapid growth of population to the extent that the development cannot generate sufficient jobs for all, (2) globalization and economic liberalization which lead to diversity in informal employment, (3) the inadequacy of formal regulations to attend to the needs of small enterprises because they are designed primarily for larger enterprises, and (4) increased adoption of informal workers by employers to replace formal jobs to lower labour cost and deal with increased competition (Huitfeldt, Sida, & Jütting, 2009).

Hart (1973), an initial scholar to introduce the concept of the informal economy through his study of informal income opportunities and employment in Ghana, determined that one can gain informal income either through legally legitimate jobs (farming, building contractors, self-employed artisans, street hawkers, petty traders, barbers, etc.) or illegitimate jobs (prostitution, smuggling, gambling, etc.). Based on Hart's (1973) discussion over these various sources of informal income, some general characteristics can be drawn of how business or individuals conduct their business activities in an informal economy. The deliberate use of the business perspective in this case is consistent with the topic of the current study.

There are eleven characteristics of business in the informal economy. First, the participants are self-employed; they make their own income instead of earning wages. Second, the frequency of income is irregular; this includes highly varied expected rewards. Third, they

are self-financed; in other words, instead of relying on formal credit loans, they use their own savings to start up and maintain the business. Fourth, they do not need to have a specific ability or skills; nevertheless, they may need some skills which can be acquired by informal apprenticeship through payment of a small fee. Fifth, the payment they receive for their product or service can be direct or delayed. Sixth, the informal business requires only a small input of capital and uses simple equipment; the participants can make considerable profit without needing much capital or space. Seventh, the relationships of individuals within informal business are with or without fixed premises; this means the relationship may be based purely on subjective rather than rational reasons. Eighth, the relationships involve a variety of casual connections. Ninth, the participants do not belong to any organization which means they do not have any on-going, permanent obligation to anyone; this implies that they have freedom in decision-making regarding what they want to do, who they are going to work with or how they are going to do it. Tenth, in terms of type of work, activities in informal economies involve no or little added value; the business activities are mainly associated with buying and selling and ensure a fast flow of product. Lastly, in terms of the participant's position in a business network, there is role flexibility where the participant may have a variety of roles and is able to switch or combine several roles at once; this implies that the relationships that a participant develops with others in the network are temporary.

Derived from the eleven characteristics mentioned by Hart (1973), the informal business relationships can be broken down into 15 characteristics grouped into five criteria: type of firm, type of business activities, characteristics of reward and payment, characteristics of business relationship, and network structural position. Some characteristics proposed by Hart (1973) can be separated since they have different meaning. For instance, regularity and variation of income that come under one character can actually be separated. The same goes for limited added value activities and aiming to ensure fast flow of product. Furthermore, role of flexibility and temporary relationships that come under one's position in the network can be put under different criteria; viz., type of business relationships and network structural position. The 15 characteristics are as follows:

1. Type of business/firms

- (1) Self-employed
- (2) Self-financed
- (3) Not in organizational form

- (4) Independent
- 2. Type of business activities
 - (5) Little or no added value to the product
 - (6) Aim to ensure fast flow of product
 - (7) Use a little capital or space
- 3. The characteristics of reward and payment
 - (8) Irregular
 - (9) Highly varied
 - (10) Direct or delayed
- 4. The characteristics of business relationships
 - (11) With or without fixed premise
 - (12) Includes variety of casual connections or partners
 - (13) Temporary relationship
- 5. The network structural position
 - (14) Flexible position
 - (15) Variation of role

According to Hart (1973), the emergence of the informal economy depends on the demand created by the current stages of activities in the formal sector. This implies that the informal economy is ever present because it is impossible for a formal economy to cater for all demands of all markets. The distinct features of the informal economy activities show that market and business relationships in the informal economy are unstable. The market (which includes both demand and supply markets) is unstable in a sense that participants are unable to predict the continuity of the market; this results in irregular and varied income. Unstable business relationships develop due to the way business activities are done; i.e., the absence of rules or standardized procedures means there are no game rules and control, which leads to a high rate of opportunism and relationships which entail high levels of risk. In addition, being self-employed and self-financed, participants cannot rely on a formal institution for support. Consequently, they have to work their business by themselves and bear all the risks alone. As a result, developing reliable relationships is crucial to one being able to thrive in the informal economy. In order to have reliable partners, participants need to manage their relationships in the supply chain since the nature of relationships is temporary because there are no legal contracts binding them.

Managing B2B relationships allows participants to build long-term relationships with suppliers and customers; relationships in which opportunism is reduced, risks are shared and cooperation is developed in order to promote and maintain the market and develop regularity, stability and security for the business. Thus, managing relationships in the context of the informal economy is complex due to their informality. Because there has been limited investigation regarding the managing of business relationships in the context of the informal economy, there is a need for further observation and study. The current study has been developed as a starting point to explore how B2B relationships in the informal economy are managed; viz., within the context of the supply chain of an informal economy industry, how an individual relationship dyad operates and how relationships along the chain of dyads can be understood and managed to sustain a business.

A banana business is typical of the informal economy that operates in Indonesia. Traditionally, banana supply chains which support the local banana industry consist of small-scale, self-employed, self-funded and unregistered businesses. Members of the banana industry supply chains are not supported by any formal or government institutions, indicating that they do not have obligations to pay taxes towards any formal institutions and have only temporary commitments towards each other. Individuals are free to join and/or leave a banana business without any substantial consequences for the industry or society. Nevertheless, the banana industry stands as a main contributor to the total national fruit production in Indonesia and is a potential source of income for the 529 million households in the country (Direktur Budidaya Tanaman Buah, 2008). Thus, appropriate relationship management in Indonesian banana supply chains can be an indicative reference for mechanisms of how to manage B2B relationships in an informal economy.

Although business in the banana industry has always existed in Indonesia, the academic concept of the informal economy was introduced some 40 years ago and only recently has the topic received more general interest. The primary reason for this is the resilience of the informal economy during recent economic crises. A Cunningham and Maloney (2000) study on the impact of the 1995 Mexican crisis on various demographic groups shows that, in general, the informal sector does better in recovering from the impact of a crisis. A more comprehensive study, by Horn (2011), reports on the impact of global financial economic influences on informal economy workers from 10 countries across Africa, Asia and Latin America following the 2007 global financial crisis. The study reveals that, although participants in the informal economy experience a significant negative impact which

includes declining demand, increased competition and limited access to emergency or recovery measures, they were able quickly to make necessary adjustments. The informal workers, being mainly self-employed, responded to the impact of the crisis by altering the price of their products, shifting their working hours, changing the location from where they buy and sell their product, switch their production or product to accommodate changes, or find a new supplemental source of income. This demonstrates that the informal economy, in fact, is very agile.

Now, the informal economy has become a more important topic due to its significant impact on reducing poverty. Statistics show that due to the growth of the informal economy, the poverty rate (indicated by the share of working poor at US\$1 per day) in Asia-Pacific regions has fallen from 30 percent in 1996 to 17.6 percent in 2006 and the figure is expected to fall to 9.8 percent in 2015. This corresponds to the overall share of informal business as part of the total economy; it is predicted to increase by 2015. Following the trend, the share of informal economy in South Asia is predicted to be more than 70 percent, South-East Asia and Pacific 55 percent, and East Asia 50 percent (ILO, 2007a, 2007b).

The increasing importance of the informal economy, coupled with its ability to quickly bounce back after the global financial crisis as it was reported in the studies by Cunningham and Maloney (2000) and Horn (2011), suggests a need to sustain and even improve its growth. One of the best ways to increase productivity growth is by strengthening the business networks within the informal economy through relationship management. Relationship management may help participants within the informal economy to have access to capital or business resources and smooth their business transactions.

2.3 Relationship marketing management

Stable relationship marketing management, based on the relationship marketing concept first introduced by Berry (1983), highlights the importance of a customer focus in marketing. The author defines relationship marketing as the efforts to attract, maintain and enhance customer relationships. This definition is based on the belief that servicing and selling to existing customers is as important to long-term marketing success as acquiring new customers. Thus, marketing is not only about attracting new customers, but also about cementing the supplier/customer relationship through servicing customers and transforming indifferent customers into satisfied, loyal and repeat-business ones.

Sheth (1994) presents a different view by proposing that relationship marketing is not only concerned with the customer but also the supplier. He refers to relationship marketing as the effort to understand, explain and manage on-going business relationships between supplier and customer. Similarly, Grönroos (1994, p.9) stated that the objective of relationship marketing is to “identify and establish, maintain and enhance and, when necessary, terminate relationships with customers and other stakeholders, at a profit so that the objectives of all parties involved are met: and this is done by mutual exchange and fulfilment of promise”. These views show that there is a shift of paradigm in relationship marketing, from marketing to management of the process. The management of relationships should be geared to building long-term relationships (Kotler 1992).

Thus, El Ansary (2005) introduces a new term ‘relationship marketing management’ which, in practice, refers to the application of strategy design to relate to customers and partners in the marketing system. In effect, relationship marketing management is the managing of relationships among partners in order to implement marketing strategies (El Ansary 2005). In other words, the nature of relationship marketing management is managing relationships with suppliers in a given supply chain to deliver the ultimate product or service to consumers.

The role of relationship marketing management is becoming more important today as markets have become increasingly dynamic and uncertain. The primary cause of market dynamics is the unpredicted changes in various aspects such as consumer preferences, technology, economic conditions and political situations. Moreover, globalisation has been recognized as a cause of dynamic markets (Buckley & Ghauri, 2004; Grunert, 2003; Medabesh & Mohiuddin, 2011).

The dynamics in the market today have made markets more competitive as firms are challenged to seek business advantages. Competitive advantage refers to the ability to use resources to perform better than others in the same industry or markets (Porter, 1985). In order to gain competitive advantage, firms need to develop and nurture the relationships with their partners since a single firm cannot compete or gain competitive advantage by itself. Scholars have identified that the nature of business has shifted from competition faced by individual firms to competition between supply chain networks (Boehlje, 1999; Hunt & Arnett, 2006). Thus, to better compete, business interactions should involve relational

exchanges (Hunt & Arnett, 2006). This is consistent with the view of El Ansary (2005) who concludes that the outcomes of customer relationship management are primarily satisfaction, retention and loyalty, while the goal of partner relationships is to optimize supply chain performance through trust, commitment, communication, cooperation and power-dependence.

Empirical studies have shown how relational exchanges facilitate supply chain operation to gain competitive advantage. Merschmann and Thonemann (2011) conducted a study on 34 German consumer goods manufacturers with revenue over 250 million Euros; they discovered that, in uncertain environments marked by uncertain demand, product variation, product complexity, sourcing complexity, order variation and process variation, highly flexible supply chains perform better than companies with less flexible supply chains. One reason is that supply chain flexibility is underpinned by reliable sharing of data from customers who are facilitated by high trust. As determined by Golden and Powell (1999), the provision of increased data between partners is more related to trust and partnership than technological capability.

A study of 144 Iranian chain stores also shows a direct affect of relational factors on a store's competitiveness; it was found that commitment, communication and conflict management lead to competitive advantage (Razieh & Seify, 2014). In Industrial markets, an understanding of a partner's culture/characteristics has been shown to influence customer-supplier interactions and by enhancing their relationship by means of mutual respect and understanding allows them to be competitive in competition (price/product), uncertain economic conditions or other challenges (Schultz, Evans, & Good, 1999).

In their research on management of the innovation process, Birkinshaw and Mol (2006) found that innovation involves highly interactive features. Innovation can happen only through the relationship between the focal firm and its partner suppliers when they turn the new concept into implementation. Such a relationship needs to be built on trust to allow knowledge transfer which is one of the keys to innovation and the basis on which to build competitive advantage (Javalgi, Gross, Joseph, & Granot, 2011; Mol & Birkinshaw, 2009).

Relational factors such as trust and power have an important role in supply chain integration which leads to competitive advantage. A study of 2051 Chinese firms operating in various industries shows that supplier integration, through combining resources and competencies

from various supply chain partners, enables the supply chain to gain competitive advantage. However, such integration itself is made possible by the presence of trust and coercive power (Yeung, Selen, Zhang, & Huo, 2009). These studies have shown that the presence of relational factors such as trust, commitment and satisfaction in relationship management are critical in effecting supply chain integration, supply chain flexibility, innovation and relationship success which lead to competitive advantage.

Members of Indonesian banana supply chains constantly face uncertainties in various dimensions such as unreliable delivery due to poor infrastructure, high supply variation, unstable markets and credit payment (Abera-Kanyamuhungu, 2005; Arvitrida, Pujawan, & Supriyanto, 2010; Singgih & Woods, 2003). In such situations, to respond to uncertainties, managing of relationships with business partners (customers and suppliers) is crucial for all concerned in the banana supply chain (Lai, Bao, & Li, 2008; Sancho & Vázquez, 2011).

Competition in the local market is increasing due to the growing number of banana traders. There are two main reasons for this; firstly, banana has a very high potential to grow in Indonesia due to suitable climate and soil condition, and secondly, there is no barrier to joining the banana industry or trading. In Indonesia, the traditional banana supply chain belongs to the informal economy. Participating in the banana supply chain informal sector is gaining more popularity particularly for low and middle income households because it does not require formal organization, it allows for independency and it gives freedom to gain capital from legal or illegal sources (Yunus, 2011). Thus, members of banana supply chains are most likely to face intensifying competitive situations.

Successful management is underpinned by relational factors such as trust, commitment, power-dependence, satisfaction, communication and cooperation. These factors are not independent of each other; they are related in the sense that one factor can affect, or be influenced by, another. For instance, Morgan and Hunt (1994) found that trust affects relationship commitment and encourages satisfaction (see also Mohr & Spekman, 1994). Satisfaction is the antecedent of trust and commitment (Hennig-Thurau, Gwinner, & Gremler, 2002; Moliner, Sánchez, Rodríguez, & Callarisa, 2007) but other studies find that trust and commitment are antecedents of satisfaction (Johnson, Sivadas, & Garbarino, 2008; Payan & Svensson, 2007). Coercive power leads to decreased trust (Morgan & Hunt, 1994) but it also fosters cooperation (Bachmann, 2001; Belaya & Hanf, 2009). This implies that there is no 'one size fits all' relational-based marketing management. In other words,

relationship marketing management is shaped by the distinct characteristics of a given context.

The role of context in shaping relationship marketing management has become more important; particularly in the international business area where more multinational companies are interacting within emerging economies. Globalisation allows firms to outsource a host of manufacturing activities from high-cost to low-cost regions. Opening up to emerging economies means exposing oneself not only to new work ethics or standards, but also a new culture; to gain competitive advantage, one needs to adhere to the culture of the given emerging economy. This is illustrated in previous studies conducted in China, one of the largest emerging economies, where achieving competitive advance is underpinned by close inter-organization relationships. Such relationships lead to institutional advantage which allows firms to gain competitive advantage through knowledge transfer, differentiation and cost advantage (Li & Zhou, 2010; Ramasamy, Goh, & Yeung, 2006). However, gaining competitive advantage in China is unique because Chinese societies are based on traditional Confucian-values relationships that shape all Chinese business organizations and managerial practices. In their studies on 215 firms across China, Ramasamy et al. (2006) found that knowledge transfer is facilitated by three components; viz., trust, commitment and communication. Basically, the Chinese concept of *Guanxi* refers to friendship built on particular criteria such as shared attributes, identity or origin, and which emphasise continued exchange of favour and implicit mutual obligation (Pye, 1992; Tsui & Farh, 1997). It has its roots in Confucian values which believe in sincerity, familiar virtue, the saving of face and the network of personal relationships (Bond, 1996; Chinese Culture Connection, 1987).

The impact of ethnicity-related culture in managing business relationship is also evident in Malaysia. Based on their study on relationship marketing in Malaysian banks, Fernando, Ho, Algunaid, and Zailani (2013) argue that each ethnic group builds relationships in a different way from one another; i.e., because of cultural differences, Chinese, Malays and Indians have different ways of approaching a person and establishing a personal and business relationship.

The influence of culture on relationship marketing management is supported by the most recent study of the affects of culture on international relationship marketing by Samaha, Beck and Palmatier (2014) who examine 47,864 relationships across 36 countries from six

continents. Their study reveals four important findings. Firstly, they stated that different cultural dimensions have varied importance; for instance, the affect of individualism-collectivism on relationship marketing is 114%-169% greater than other cultural dimensions while other dimensions such as masculinity-femininity have very little affect. Secondly, they argue that the impact of relationship marketing is far more effective in developing countries compared to developed countries which, in their study, was exemplified by the United States of America. In addition to that, they mentioned that cultural customization is required in designing strategies for building customer relationships; for instance, dependence is 150% more effective for building relationships in Russia than the United States while relationship investment is 58% less effective in Russia than in United States. Lastly, they argue that culture has a greater influence on relationship building than on relationship outcomes; therefore, managers need to give more specific attention to relationship-building strategies.

As a pluralistic country, Indonesia consists of distinct native ethnic groups with different languages spread across thousands of islands. Despite these differences, there are some social values that bring people together; one of them being *gotong royong* which refers to collective social activity. It signifies mutuality and reciprocal assistance that is based on the belief that humans depend on each other because one cannot live on his or her own and, therefore, must maintain good relationships with others and do his/her best to conform to the community (Bowen, 1986).

Social values form the norms which shape a people's way of life and social interaction. This is shown in a study conducted over 10 years ago into Indonesian banana supply chains. Singgih and Woods (2003) discovered that culture/norms strongly affect the relationship marketing management between banana farmers and wholesalers. They found that farmers' interaction with wholesalers is influenced by the village's social stratification which makes farmers reluctant to bargain in a straightforward manner because the stratification which accords the wholesaler a relatively high status. Another important outcome from the study indicates that social norms affect the way farmers bargain. The value of peasant solidarity holds that everybody has the right to earn money to support their families and, thus, bargaining to obtain more profit for themselves without considering the other party's need and profit is considered disrespectful to others' rights.

The role of relationship marketing management in Indonesia banana supply chains is crucial because the supply chains operate in the context of the informal economy; i.e., with a high

degree of uncertainty and strong cultural influences. Palmer (2000) mentions relationship marketing is not suitable for highly formalized marketing situations where business activities are carried out under strict rules. This finding indicates that relationship management in less formal and informal marketing situations is important and does need managing.

2.4 Network structures and power relationship

The role of network structure is important; it allows a firm to enhance its performance and gain competitive advantage (Gadde, Huemer, & Håkansson, 2003; Wang & Fang, 2012; Yang & Liu, 2012). In their study of 250 firms in Taiwan's glass industry, Yan and Liu (2012) found that network structure facilitates the impact of a firm's agility on performance outcomes. A firm's capability to be agile is underpinned by its ability to synergize all information from its customers, competitors and suppliers in order to detect economic shifts and regulatory changes that are relevant to the firm. Access to external reliable information, resources and capabilities depend on how the firm utilizes the network structure; viz., network closure and structural holes. A firm's ability to bridge structural holes opens up access to diverse resources, not only the ones embedded within the network but also sparse resources embedded in other networks connected through agents. Meanwhile, a firm's ability to maintain superior network closure allows the firm not only to obtain and sustain direct critical and valuable knowledge and resources but also to reduce search costs and improve efficiency in obtaining critical resources and capabilities (Yang & Liu, 2012).

Network structure is associated with performance. In their survey of 1,520 new ventures, Wang and Fang (2012) found a moderating affect of environmental uncertainty on the relationship between network structure and innovative performance. Their conclusion was that with network centrality, the new firm having access to various resources and technologies from different sources is able to develop special and novel products. Cooperative networks, on the other hand, can negatively influence innovative performance. Although through a cooperative network, the new firm can access information and resources related to changes in industry and technology, such information tends to be similar or homogenous and, thus, inhibits innovative performance. In the midst of environmental uncertainty, the influence of network centrality on innovative performance increases.

Network centrality is increasing with the ability to acquire and control resources. In an uncertain environment, information and resources become very valuable and scarce;

everyone wants to be the first to have them, retain them and utilize them to reduce the negative impact of uncertainty to enable achievement of competitive advantage. One's ability to acquire and control scarce resources signifies the use of power. Network centrality allows a firm to access others within or outside the network in several modes to gain scarce resources and information (Burt, 2000; Freeman, 1979; Kratzer & Letti, 2009). Thus, the centralised position allows a firm to coordinate the actions of others in the network (Hossain, 2009). Kilkenney and Fuller-Love (2014) argue that the strategic position of a firm is influenced by the type of network structure, which can be a circle, chain, tree or star, with respect to three factors; viz., market power, quality of information sharing and robustness of the network to the loss of a member. Therefore, in order to understand the competitive position of a firm, structure can be indicative of the relations among and between members of the network.

Collaboration with others in the network allows for the creation of heterogeneous resources that can be used to further enhance a firm's performance. Gadde et al. (2003) indicate that a firm can continuously combine its activity and resources with the activities and resources of an engaging partner to create new resources. Through collaboration and inter-dependence, the engaging parties can use the new resources to enhance their performance. Performance may be enhanced also by repositioning and strategizing in the business network. A study by Schepis, Purchase, and Ellis (2014) on the interaction of indigenous firms and mining companies in Australia shows how the structure of a network can be altered by restructuring the immediate relationships and wider web of dependency in the network. By collaborating with mining companies, an indigenous firm can strengthen its position in the network; thereby allowing greater access to resources and opportunities. On the other hand, by taking the indigenous firm in, mining companies actually can bridge the structural holes of the network and open up access to resources and support. Structural holes are defined as the absences of some connections between two parties that are both linked to a particular role (Brass, Galaskiewicz, Greve & Tsai, 2004; Burt, 1992). Indigenous firms have access to workers to fill the vacancies in a mining company and/or non-indigenous sub-contracting firms to provide supporting activities when needed. In addition, some indigenous firms are involved in political aspects of their community through which the companies can gain support for issues such as land ownership (Schepis et al., 2014).

Restructuring a network includes integration of firms. Through this integration, engaging parties are actually co-creating value by integrating their resources to create new resources or

new offerings (Vargo & Lusch 2011). This integration involves working together in innovative co-productive relationships and reconfiguring the roles of each engaging party in relating to others which then lead to a new value creating system (Ramirez, 1999). Grönroos (2011) and Möller, Rajala, & Westerlund (2008) view value co-creation as an activity to create a service for a customer because the user of the resources is the customer. This perspective confirms the Vargo (2008) contention that service is the logic to understand value creation and marketing. The logic of service, according to Grönroos (2011) is based on the notion that in order to support customer value creation, a supplier needs to strive to get involved in processes of the customer.

Power can be studied meaningfully in networks because, fundamentally, it is a social structural phenomenon (Cook & Emerson, 1978). According to Stolte and Emerson (1977), connectedness has an immediate implication on dependence and, therefore, power. The study of power is based on power-dependence theory which states that the power of one party over another is an inverse function of the party's dependence on the other party (Emerson, 1962, 1972). The dependence of one party on another is a function of the value of the resource desired and the scarcity of the resources (Cook & Emerson, 1978; Cook, Emerson, Gillmore, & Yamagishi, 1983; Stolte & Emerson, 1977). However, this finding was tested in a negative exchange network where exchange in one dyad diminishes or prohibits exchange in a connecting dyad. Yamagishi, Gillmore and Cook (1988), testing the theory in a mixed network consisting of both negative connections and positively connected chains, found that distribution of power is influenced by network position, the distance from the source point and the control of resources that may be more or less scarce.

A power imbalance in food supply chains generally favours the retailer or buyer (Cox & Chicksand, 2007; Hingley, 2005). Being closest to consumers, the retailers have direct access to information including market, price and technology information that can be used to influence the consumers' choice (Olsen, Prenkert, Hoholm, & Harrison, 2014). Such a position gives retailers the power not only to offer a stable market, competitive pricing, financial support and incentives but also to impose penalties should the required products fail to meet the desired standards. As such, the network position of retailers allows them to control other people, resources and activities, including improving coordination and cooperation in the supply chain network (Belaya & Hanf, 2012; Maloni & Benton, 2000; Olsen et al., 2014). On the other hand, suppliers try to balance such power by reconstructing the existing relationship; suppliers can gain more influence in the relationship by improving

their technical power. Also, to reduce the dominance of customers, suppliers can restructure and strengthen their position by merging with their competitors or vertically integrating forward. Faiguenbaum et al. (2002) found that by forming farmer groups, smallholder farmers can enhance their bargaining power towards their customers.

Hingley (2005) argues that firms may tolerate the imbalance of power in order to gain and maintain profitable business. Previous studies have reported how farmers producing for modern retailers use more inputs and even overuse chemicals such as pesticides and fungicides in order to avoid rejection by wholesalers. While these actions result in higher production costs compared to producing for traditional retailers, the implication is that the profit gained from supplying modern retailers is equal to that gained from transacting with traditional retailers. Yet, many farmers prefer to submit to the authority of modern retailers because it gives them a guaranteed price and market security (Balsevich et al., 2007; Emongor & Kirsten, 2009; Hernandez, Reardon, & Berdegue, 2007; Minten, Randrianarison, & Swinnen, 2009).

2.5 Supply chain uncertainty and risk mitigation

Risks in the supply chain network arise due to the inherent uncertainties from internal and external factors in the network environment. How much uncertainty poses a risk to a firm depends on how the firm can control or reduce the effects of uncertainty. There are various sources of uncertainty in supply chain networks. The earliest studies on supply chain uncertainty focus on demand uncertainty (Forrester, 1961). Decades later, Lee, Padmanabhan and Whang (1997) split demand uncertainty into end-customer demand and demand amplifications. In his study on the DeskJet family of low-cost printers, Davis (1993) identified three sources of uncertainty; viz., demand, manufacturing process and supply. These sources are inter-related because uncertainty in the manufacturing process is affected by both demand and supply uncertainty.

Drawing from a study by Davis (1993), Lockamy-III et al. (2008) asserted that uncertainty is caused by the inability of an organisation to use its information flow and make decisions to control the process. Meanwhile, Prater (2005, pp 526-528) proposed a complex model of supply chain uncertainty which highlights four macro-level uncertainties which could be broken down further into eight micro-level uncertainties; viz.,

1. *general variation* (variable, multiple goal, constraints),
2. *foreseen uncertainty* (amplification, parallel),

3. *unforeseen uncertainty* (deterministic chaos, long-term planning), and
4. *chaotic uncertainty* (general non-deterministic chaos).

Variable uncertainty is caused by differences between forecast and actual values; these may include demand, sales, market growth and required inventory. Multiple goal uncertainty arises when there are several goals that may or may not be mutually supportive. In turn, this causes constraints uncertainty. Amplification and parallel uncertainties refer to complications that arise due to the way customers interact with suppliers in other tier of the supply chain or different supply chain but connected to the focal supply chain. Deterministic chaos uncertainty may result from a supply chain decision-making processes or supply chain control systems. Long-term planning uncertainty can stem from the inability in the supply chain to predict discontinuities apart from easily predicted patterns. Non-deterministic chaos uncertainty refers to the inability to predict events which are totally random as opposed to deterministic chaos which has stability (Prater, 2005; Wilding, 1998).

Another model of supply uncertainty is proposed by several authors who based categories of uncertainty on specific product characteristics; e.g., Fisher (1997) asserted that uncertainty depends on the type of product. He distinguishes functional from innovative products based on the aspects of demand which include product life-cycle and product variety. Functional products require an efficient supply chain while innovative products require a responsive supply chain; the latter entailing more uncertainties. In their study on uncertainty in supply chain of granulated pigments, van Donk and Vaart (2005) identify two sources of uncertainty: volume and mix/specification uncertainties. Van der Vorst and Beulen (2002) studied the uncertainty and redesigning effective supply chain strategies. They identify four sources of uncertainties: viz.,

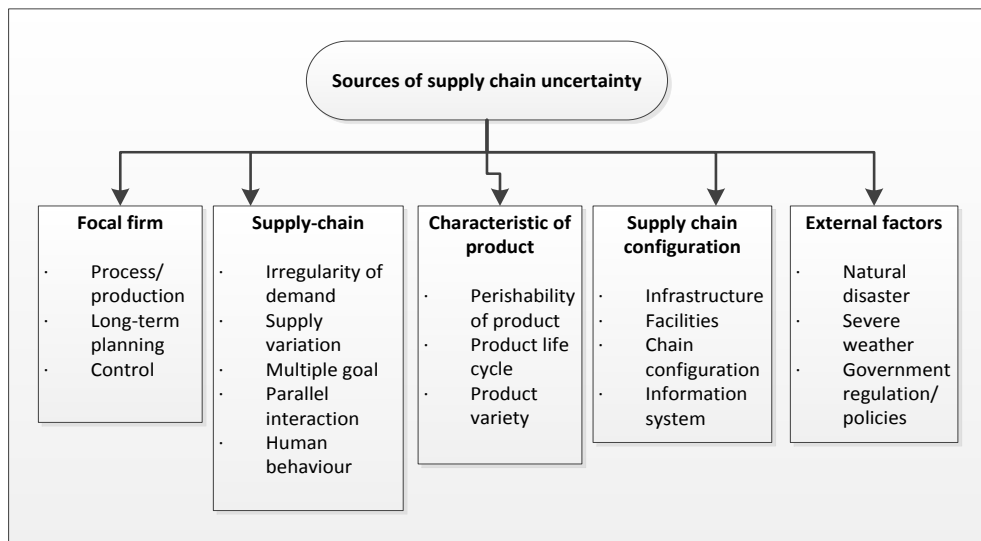
1. inherent characteristics of the strategy (includes changes in demand, perishability of product, fluctuation in process outcomes, and variation in supply),
2. supply chain configuration (this relates to chain infrastructure and availability of facilities),
3. supply chain control structure (order forecast horizon, lead-time gap, decision policies and complexity, supply chain information system) and
4. supply chain organization structure (human behaviour uncertainty).

Rodrigues et al. (2008) investigate uncertainty from the transport perspective which leads them to identify five categories of uncertainty; supplier, customer, carrier, control system and external uncertainties.

From the studies discussed above, 17 sources of uncertainty have been identified which can be classified into five groups (see Figure 2.1): viz.,

1. Uncertainties that come from the focal firm or internal organization; these include process/production, long-term planning, and control.
2. Uncertainties that come from supply chain operations; these include irregularity of demand, supply variation, multiple goal, parallel interaction, and human behaviour
3. Uncertainties that arise from the characteristics of products; these include perishability of product, product life cycle and product variety.
4. Uncertainties inherent in the supply chain configuration; e.g. these include infrastructure, facilities, chain configuration and information system.
5. External uncertainties resulted from factors outside the supply chain that cannot be controlled; e.g., natural disaster, severe weather and government regulations/policies.

Figure 2.1. Sources of Supply Chain Uncertainty



Adopted from: Fisher (1997), Naim & Whiteing (2008), Prater (2005), van Donk & Vaaart (2005), and van der Vorst & Beulen (2002)

Out of the above five sources, the supply chain, characteristic of product, supply chain configuration, and external factors may seem to fit the condition of Indonesian banana

supply chains. This is based on the previous studies that mentioned factors such as varied planting method, interlinked chains, absence of cold storage, short shelf-life, fragmented infrastructure, interlinked chains with multiple actors, and vulnerability to disease (Abera-Kanyamuhungu, 2005; Arvitrida, Pujawan, & Supriyanto, 2010; Direktorat Jenderal Hortikultura, 2008; Nasir & Jumjunidang, 2003) have characterized the traditional banana supply chains in Indonesia. The term focal firm does not seem to be relevant to members of traditional supply chains since members of the supply chains are not in organizational form but rather persons running their business and supply chain activities traditionally.

Literature on the management of supply chain risk and uncertainty has explored methods that can be applied to mitigate the unwanted effects from uncertainty. Supply chain flexibility has been suggested as an approach to cope with uncertainty (Gosling, Purvis, & Naim, 2010; Sawhney, 2006). Sawhney (2006) proposes three dimensions of flexibility; input, process and output. Input flexibility includes multiple sourcing which in practice needs a careful balance because adding more suppliers may increase supply risk in terms of higher costs, quality issues and delivery reliability (Lee, 2002). Process flexibility includes labour and machine flexibility which can be used to manage people, equipment and infrastructure flexibility. Output flexibility refers to customer flexibility; it is when customers are less sensitive to delivery dates or product specifications (Pujawan, 2004).

In regard to demand uncertainty, other strategies have been mentioned. For example, postponement by means of delaying activities until the latest possible point in time when market information is more definite (Yang & Yang, 2010), implementation of a technology system to enable a better and faster flow of strategic information among supply chain members (Prater, 2005; Towill & McCullen, 1999), and buffering stock or developing lean production (Davis, 1993; Thun, Druke, & Hoening, 2011).

Beside the risk and uncertainty in supply and demand that are common in all supply chains, a food supply chain also faces threats regarding food safety. Food-borne illness or food poisoning may occur when consumers use food infected by pathogens or bacteria. Millions of people suffer from food-borne illness every year, although many cases are not reported. Food safety risk can occur in any link/node of the supply network. It may emanate from the supply of raw materials, production, processing, packaging, storage, transportation and/or distribution. It may be caused by the natural environment such as air pollution and land contamination, or by human factors such as excessive use of pesticides, illegal use of food

additives or inadequate infrastructure such as dirty sanitary conditions (Liu, Zhang, & Li, 2014; Zhang, Li, & Zou, 2013). In mitigating food safety risk, it is important for the supply network to implement a system that enables timeliness and accuracy of information flow in order to quickly trace the causes of disruption (Nganje & Skilton, 2011).

Managing risk in the supply chain network requires collaborative relationships among supply chain partners in the network. Collaboration refers to supply chain integration in which multiple links in the chain synchronise their activities by improving their coordination and align their decision-making processes (Chandra & Kumar, 2001). In order to manage uncertainty effectively, people in the supply chain need to develop closer relationships so as to facilitate collaborative actions (Bowersox, Closs, & Stank, 2003; Cao & Zhang, 2011). Collaboration supports the development of flexibility and responsiveness, thereby reducing risk (Hoyt & Huq, 2000). Postponement strategy to reduce uncertainty requires closer relationships between supplier and customer to accommodate last minute changes. Closer relationships facilitate the coordination process and provide a unique opportunity to help firms manage operational and environmental uncertainties inherent in the supply chain network (Manuj & Mentzer, 2008). The flow of strategic information requires a trusting approach from both supplier and customer to improve asset management, increase resource control, enhance the flexibility process, reduce cost and, thereby, reduce uncertainty (Fawcett et al., 2012; Klein & Rai, 2009). The risk of food poisoning can be reduced in an integrated supply chain network that has been organized to include controlled detection and diagnosis processes, sustained relationships and extensive partner monitoring (Nganje & Skilton, 2011). The effectiveness of strategies in reducing and coping with uncertainty within the supply chain network is influenced by the management of relationships.

2.6 Agility in supply chains

The concept of agility cannot be separated from the overall operation of a business. The business environment is dynamic in the sense that it changes constantly in a variety of ways and can be unpredictable. Thus, any business entity needs to be responsive to the dynamic environment in order not to miss opportunities over time. Responsiveness has two dimensions, speed and flexibility, and the responsiveness of a firm or a supply chain is enabled by three major components; namely, collaboration of partners, information technology and systems, and knowledge management (Gunasekaran, Lai, & Cheng, 2008). Firms respond to changes in their business environment because of what are referred to as agility drivers. Zhang and Sharifi (2000) define agility drivers as the changes in the business

environment that make firms search for new methods in running their business in order to maintain a competitive advantage. This definition emphasises that the nature of a dynamic business environment makes a business/supply chain more competitive. Similarly, Naylor et al. (1999) defines agility as taking advantage of every opportunity in a volatile market to make a profit by using market knowledge even in a virtual corporation. This is in line with a later study by Roberts & Grover (2012).

Agility is crucial as the business environment becomes more competitive, not only to maintain performance, but to react quickly and survive. Organisational agility has emerged as an important determinant of success in the competitive environment of business. The study by Roberts and Grover (2012) on 208 high-tech firms indicates that a firm's agility, comprised of the firm's capability to sense and respond to its hypercompetitive environment, significantly influences performance.

There are various drivers of agility that force firms to search continuously for ways to maintain competitive advantage. The drivers of agility are measured by the degree of turbulence in the business environment. Sharifi and Zhang (2001) conducted two case studies on agility drivers and capabilities; they identified five areas of agility drivers that impacted on the firms studied. The first factor related to the market place, which includes changes in product model, the growth of a niche market and political changes. The second factor was competition, characterized by rapidly changing markets, increasing rates of innovation and increasing demands for new products. Another important driver of agility is changes in customer demand or preferences; these include the need to meet increased demands for expected quality and sudden changes in the quantity and specifications of orders. The fourth factor, technology, related to the introduction of modern materials, the introduction of better production facilities and up-to-date use of information technology. The last driver comprised a social factor to include workforce expectations, legal/political pressures and cultural issues.

In their study on agility drivers and enablers, Vazquez-Bustelo, Avella and Fernandez (2007) developed a model and tested it on 283 manufacturing firms across Spain. Their findings confirm that agility drivers can be seen from two perspectives; viz., dynamism and hostility. Dynamic drivers consist of fast-changing customer preferences, frequent innovation in production processes and frequent innovation in products and/or service. The term 'hostile

drivers' refers to competition; it can be competition to gain market share at a global, regional or local level.

In another study, very short lead times, frequent deliveries, uncertainty of demand and increasing product variety are identified as drivers of agility (van der Vorst, Dijk, & Beulens, 2001). In comparison to lean supply, Mason-Jones, Naylor and Towill (2000) propose that market turbulence which indicates a need for agility depends on the typical nature of a product (commodities or fashion goods), market demand (predictable or volatile, product variety (low or high), product life-cycle (long or short), customer drivers (cost or availability), profit margin (low or high), purchasing policy (buy goods or assign capacity), information enrichment (highly desirable or obligatory) and forecasting mechanisms (algorithmic or consultative). Typically, these studies show that the drivers of agility may come from changes in the business environment, the features of the product/service and the characteristics of the processes.

Previous studies on the banana supply chain in Indonesia have reported a lack of using refrigeration or cold storage (Obeth & Dunne, 2007). The shelf-life of a banana is short; thus, without a cold store, bananas quickly begin to perish. Due to high perishability, therefore, banana delivery requires a short lead time. Besides that, it is also reported that variation of supply in terms of quality and quantity is high because farm management practices such as weeding and mulching vary highly between banana fields (Abera-Kanyamuhungu, 2005). In other words, provision of a consistent supply cannot be predicted. These features of the banana industry are some of the factors that shape the dynamics of the traditional banana market supply chain in Indonesia.

The ability to be agile is underpinned by the necessity to match sensing and responding capabilities in which firms can assimilate information on the product-market gap, develop process structures or configure resources in order to capitalize on market opportunities (Roberts & Grover, 2012). In order to sense the product-market gap, firms must be market sensitive to the needs of customers (Bourlakis & Bourlakis, 2004). The importance of sensitivity to the customers' demands is stressed by Vinodh (2010) who argued that agility actually enables a quick response to the dynamic demands of customers. In order to understand what customers need, it is important to understand what they most value; such knowledge, referred to as intelligence capabilities, is essential to create a superior customer value which leads to competitive advantage (Slater & Narverq, 2000). Responding

capabilities entails the ability to adapt to environmental changes (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997). The same view is shared by Setia et al. (2008) who assert that the keys to agility are; (1) discovering new opportunities for competitive advantage, (2) combining the existing knowledge, assets and relationships to grasp the opportunities, and (3) adapting to sudden changes in business situations.

2.6.1 Dimensions of agility

Apart from the manufacturing context, agility from the viewpoint of supply chain networks is represented by four dimensions; customer sensitivity, virtual integration, process integration and network integration (van Hoek, Harrison, & Christopher, 2001). Similar to that, Sambamurthy et al. (2003) argue that the capability of a firm to be agile is related to how it interacts with customers, how it orchestrates its internal operations and utilizes its relationships with business partners. Thus, supply chain agility is comprised of three interrelated capabilities; customer agility, operational agility and partnering agility.

Supply chain agility is supported by the integration of the information system among members of the supply chain network. Integration of information allows supply chain members to exchange information on real-time demand, inventory levels, production and collaborative working relationships across the network, thereby enhancing the supply chain's agility (Ahn et al., 2012; Christopher, 2000; Lewis et al., 2008).

Real-time access to information allows the members of a supply chain to quickly detect changes in customer demand and conduct an agile response upon effective information collection and dissemination (Overby, Bharadwaj, & Sambumurthy, 2006). The information system not only strengthens the agility of the supply chain but also boosts operational performance and enhances the financial performance of members of the supply chain network (Chen & Chiang, 2011). Thus, information by means of up-to-date technology is a must if supply chains are to respond in an agile fashion (Christopher, 2000).

Improving supply chain agility is not an easy task because there are several factors in each dimension that requires distinct capabilities from the supply chain members. For instance, in order to be customer sensitive, members of the supply chain must have the ability to analyze and evaluate market trends (Lee, 2004; Lin et al., 2006), design customized products (Christopher & Towill, 2000; Swafford et al., 2006), reduce the product development cycle time (Agarwal et al., 2007; van Hoek et al., 2001), reduce manufacturing lead-time (Lin et al., 2006). To be a virtually integrated, the supply chain must support integrated information

technology among chain members (Agarwal et al., 2007), internal planning and transactional systems (van Hoek et al., 2001), and supply chain-wide accessibility of information (Christopher, 2000; Lin et al., 2006; van Hoek et al., 2001; Yusuf et al., 2004). Meanwhile, to have their supply chain activities integrated, the members of the supply chain must have a common identity with compatibility of structures, information architecture and competences (Lin et al., 2006; Yusuf et al., 2004). They also must pro-actively update the mix of available manufacturing processes in their supply chain network (Lin et al., 2006). Lastly, to develop network integration, the chain members are required to have joint planning and strategic development (van Hoek et al., 2001), long term collaboration with customers and suppliers (Yusuf et al., 2004), actively share resources, risks and rewards between chain members (Lin et al., 2006; van Hoek et al., 2001).

The review on research studies of agility shows the importance for a firm and a supply chain network to adapt continuously to the business environment. Information availability and use depends on a modern information system. Firms gain information, disseminate it along the supply chain, analyse it and take necessary actions in response to environmental changes as quickly and effectively as possible in order to gain competitive advantage. However, in practice, there are many supply chains that do not have such an information system in place even though they operate in a dynamic environment. Consequently, in the absence of technological support, the supply chain agility will depend even more on the management of the relationship between members of the supply chain network.

2.6.2 Trends in food supply chain

In Asia, dramatic transformation in food supply systems is occurring in response to rapid urbanization, diet diversification and the liberalization of foreign direct investment in the food sector. Changes can be seen in the growth of the retail sector marked with the rapid growth of modern outlets such as supermarkets which seem to replace central food markets, neighbourhood stores and street sellers of food in urban areas (Pingali, 2007). The rise in retail chains has brought retail competition in the food industry to a different level. Basically, retailers aim to ensure the quality of their products because the reputation of their firms depends to a great extent on food safety (Fuchs, Kalfagianni, & Arentsen, 2009). Triggered by increasing reports on food-borne illnesses, increasing attention has been given to ensure food safety at all levels of food chains. One safety scheme that recently has been widely introduced and applied is that of traceability. Traceability is a series of mechanisms by which, as products flow through the supply chain, data is identified, prepared, collected and stored at every stage to keep a history of where the product has been and where it is going

(Oates, 2007). Traceability is also viewed as an instrument available to identify quickly the source of risks should they eventuate (Fuchs et al., 2009). The use of traceability improves food safety, reduces the risk of liability claims and improves recall efficiency (by reducing costs and enhancing control) and consumer trust in the safety of food (Meuwissen et al., 2003). Moreover, the adoption of traceability schemes has been proven to avert a number of safety problems such as dioxin in food supplies and animal feed in Netherlands, Sweden and other countries from 2004 to 2005 (Fuchs et al., 2009).

While high quality products and food safety remain crucial in the retail sector, retailers are increasingly under pressure to improve their environmental performance (Fuchs et al., 2009). Hughes (2007) observes that in the retail sector, there is a shift from price-based competition to a more sustainable innovation-based competition. The mainline retailers in many countries have started to use their credentials on the environment and on other areas such as sustainability, animal welfare, fair-trade and food miles to position themselves in different parts of the markets.

Environmental standards requiring retailers to focus on sustainability are imposed through farm-practices schemes such as GAP (good agricultural practices) and GMP (good manufacturing practices) (OECD, 2006). GAP primarily focusses on food safety and hygiene because as the emphasis on food safety has been strengthened, the number of GlobalGAP members has greatly increased (Fuchs et al., 2009). GMP basically connects all factors that assure quality, safety, and effectiveness of food, according to its specification and purpose. It comprises practical procedures and processes that provide consistent manufacture, ensure quality system, and control of products by qualitative criteria and conformity assessing criteria with intended purpose as required by the marketing authorisation (Raspor, 2008).

In Asia, the concern about food safety has increased, largely due to the fact that the majority of small-scale farmers continue to rely extensively on the use of pesticides. In Bangladesh, it was reported that farmers can spray up to 80 times a season to control fruit and eliminate borers. Poisoning in farmers is widespread and it is generally under-reported because farmers do not go to hospital when they fall sick from pesticide poisoning. The consumption of pesticide in Asia is vast and rising; e.g., the use of pesticide is up to 790,000 tons annually (Ketelaar, 2007).

Fair-trade is a paradigm developed to provide an alternative route to markets for food products coming from smallholders located in developing countries (Lewin, Giovannucci, & Varangis, 2004). In the food industry, development of fair-trade networks recognises the need to obtain sustainability through realizing the economic benefits that this can bring to the business. Under the fair-trade banner, small-scale farmers in developing countries should always get a higher price or at least sufficient return to recover their cost of production (Vieira, Aguiar, & Maia, 2007).

Primarily, fair-trade has become a marketing tool for retailers such as supermarkets (Ketelaar, 2007). Major retailers are seeking to gain competitive advantage from their 'green' environmental awareness positioning. They want their consumers to know that products the consumers buy are good for the environment and can be used guilt-free. The competition in this area is getting stronger. For instance, Hughes (2007) reported that one strawberry farmer supplying Marks & Spencer was reported on the news because he underpaid two of his foreign workers and, as a result, the farmer received the first and last warning from Marks & Spencer that should any adverse publicity about the farmer's treatment of their workers arise again, the farmer would be de-listed. These factors indicate that the implementation of traceability, sustainability, GAP/GMP and fair trade increasingly have become the reference for quality in both developing and developed countries and a source of competitive advantage in the food industry (Hughes, 2007; Ketelaar, 2007; Pingali, 2007).

Inevitably, these trends impact on the management of supply chains. For instance, in their empirical study on sustainable supply chains, Brindley and Oxborrow (2014, p.45) found that a supply chain needs to be "lean and resource efficient" and align that with a product that is "local and seasonal". 'Lean and efficient' refers to consolidation of the supply base into accredited wholesale suppliers who are able to meet sustainability objectives. On the other hand, the 'local and seasonal' strategy tends to expose a supply chain to the greater upstream risk of availability and supply failure. But this risk can be managed by relying on regular exchange information and intensive management of upstream sourcing activity through buying-to-order. The success of managing a sustainable supply chain relies on the strong desire of members of the supply chain to develop and maintain their collaborative activities that are underpinned by relational benefit, relational proclivity and connectedness (Cheng & Sheu, 2012).

Food trends can develop as a result of changes in the preferences of consumers. In response to these changes, and to take advantage of them, every member of the supply chain network, from the producer to the retailer must adopt an agreed response. Adaptation to changes in the preferences of customers invariably requires the modifying of existing supply chain beliefs, strategies and procedures. Consequently, for changes to occur in the supply chain systems, it needs a strong commitment from all members of the chain in their roles as a customer and a supplier.

In Indonesia, consumer awareness of food safety is increasing. Through various government or non-government projects, farmers are encouraged to implement and apply Good Agricultural Practices, Farming Integrated Management (IPM), HACCP, post-harvest handling and grading system to promote sustainability and food safety (World Bank, 2007). Although the number of Indonesian consumers who highly concern about food safety is increasing but it is a minority. Food with guaranteed safety is associated with premium price and the number of Indonesian consumers with adequate purchasing power to buy premium food is less than 10 percent of the population (Euromonitor International, 2007; International Markets Bureau, 2011).

In line with that, demand of organic products whose markets is increasing rapidly worldwide, also remain weak in Indonesia. There are several reasons for this. Indonesian consumers are generally distrustful of the health claims offered by producers or distributors of organic food. Besides, to most consumers, the price of organic food is considered too high (Euromonitor International, 2009a). Moreover, consumers with higher level of disposable income doubt the health benefit of organic products that they are reluctant to pay more for these products (Euromonitor International, 2007; Euromonitor International, 2009b).

Despite the rapid growth of modern retailers with higher quality food standards, traditional retailers located in wet markets are still in domination (Razdan, Das, & Sohoni, 2013). Although consumers can buy food with much lower price, traditional markets are known to be of low level of hygiene (Suryadarma et al., 2010). Compared to modern supply chains, traditional supply chains are generally of low or no standards for quality and food safety (World Bank, 2007). Previous study on traditional banana supply chain found that bananas are produced with limited agricultural inputs, harvested with inadequate post-harvest method, and transported roughly (Badan Litbang Pertanian, 2005; Obeth, 2007; Hadi, 2009;

Singgih & Woods, 2003). These implies that although more consumers are aware of food safety, food trends in Indonesia hardly changes, particularly in traditional supply chains.

2.7 A hypothetical model of the banana supply chain study

The review of the literature indicates that every supply chain operates in a dynamic business environment. The dynamics may emerge from changes within the business environment such as competition, changes in technology, change in consumer preferences, and food trends that drive a supply chain to be agile. Business environment dynamics also can be triggered by the inherent uncertainty within the supply chain. This can be caused by the characteristics of the industry and the supply chain itself which include the supply chain structure, activities and the nature of business-to-business (B2B) relationships of members within the supply chain. Banana supply chains in Indonesia operate in an informal economy. The characteristics of businesses in the informal economy, inevitably, influence the supply chain uncertainty.

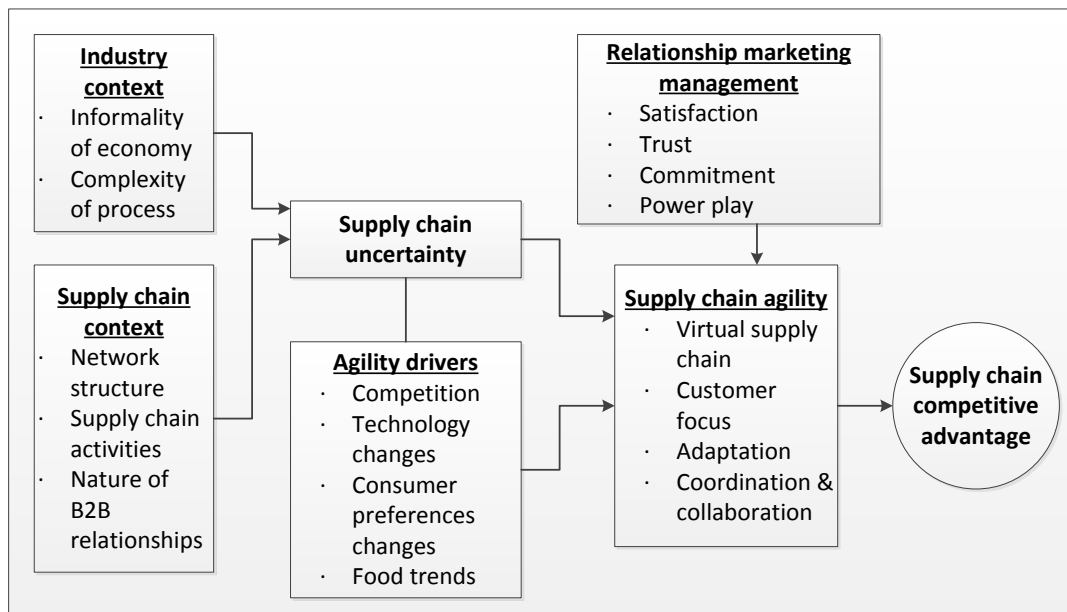
In addressing these uncertainties, a supply chain needs to be agile by improving coordination, information technology, customer focus and adaptation. These strategies are facilitated by the closeness of the relationships between chain members. Meanwhile, the closeness of relationships is underpinned by relational factors such as trust, satisfaction and commitment. From the perspective of network structure, a firm's power in the capacity to access scarce resources and valuable information, is related to its position in the network. Such power allows the firm to initiate coordination of other engaging parties or co-create resources. Thus, briefly, it can be said that supply chain competitive advantage is determined by its capability to be agile, underpinned by relationship management and network structure, in addressing supply chain uncertainties. Figure 2.3 presents the model that reflects a summary of the review of literature on the informal economy, relationship marketing management, network structure and power relationship, supply chain uncertainty and supply chain agility.

As a basis for the current study to continue, Figure 2.3 (see below) is used to indicate a hypothetical model of the extant research reviewed. Supply chain uncertainty is influenced not only by the context of the industry itself but also by the context of the supply chain network. Uncertainty forces supply chain to be agile. At the same time, the supply chain also faces external agility drivers such as competition, technology changes, changing of consumer preferences and food trends. In order to be agile, the supply chain needs to be supported by

virtual supply chain, customer focused, able to adapt to changes, and sustained by coordination and collaboration among supply chain members. The successful of these strategies of agility is influenced by how well the supply chain members manage their B2B relationships. Close and strong B2B relationships allow supply chain members to be agile in response to supply chain uncertainty and agility drivers and thus, enable the supply chain to gain competitive advantage. The model can be allied to the research questions in the current study and form the basis for developing a research schedule to guide in interviews of supply chain members; i.e., of the three major relationship dyads in the banana supply chain.

The hypothetical model reflects the roadmap to achieve competitive advantage, which is developed from the related literature. However, since this study focuses on traditional banana supply chains that operate under an informal economy, competitive advantage that arise through this study maybe different to general understanding found in the literature. Therefore, it needs to be viewed within the context.

Figure 2.2. Hypothetical Research Model



2.8 Conclusion

The role of the informal economy is becoming more important due to its ability to decrease a country's unemployment rate and reduce poverty in the society. The informal economy has a unique character in comparison to the formal economy; its business activities are different from those of the formal economy where the rules of large corporations are clear, employees

are bound through legal contract and the industry operates as part of a formal system. Relationship management, therefore, must acknowledge the distinct characteristics of the informal economy and produce a relationship management concept that accommodates and promotes these characteristics.

Relationship management is needed to gain competitive advantage. Emerging markets pose a challenge because they are characterized by rapid changes, underdeveloped technology and weak infrastructure. Relationship management is influenced by context and, eventually, shaped by it. Culture and norms have a great influence on the way people interact, not only in the community but also in business. How norms shape relationship management to build competitive advantage in a supply chain needs to be explored more.

Power-dependence is influenced by the structure of a network; those with access to resources are the ones with the power. Information, including knowledge, is considered one of the main resources. However, beside information, previous studies do not specify the other resources. As market situations differ from one another, so do the nature and importance of specific resources. In other words, some resources are valuable in one network, but can be less appreciated in another network.

Previous studies mention collaboration or cooperation with other parties in the network as a means for gaining access to resources. However, there are situations where collaboration or cooperation may not be feasible. Thus, the question as to how a network member gains access to what they perceive to be the valuable resources when collaboration is not feasible needs more investigation.

Risk and uncertainty are inherent in business. The literature provides numerous strategies on the managing of uncertainty. However, not all supply chain networks have the capital or resources to implement risk/uncertainty management strategies; yet, they face similar business uncertainties (e.g., supply disruption, uncertain demand and food safety issues). Without a risk management scheme, how do these supply chains manage uncertainty? This is the gap in knowledge that needs to be filled.

Agility is an important feature of a supply chain because the business environment is dynamic. Thus, a supply chain must have the capabilities to adapt to its dynamic environment and changes in consumer trends. The ability of a supply chain to be agile is

underpinned by its ability to sense changes and gain and use relevant data before taking actions. Effective supply chain agility is facilitated by a virtual supply chain and a strong relationship commitment. However, in the absence of information technology or system, supply chain agility will depend on the management of relationship between members within the supply chain network to facilitate its agility. As to how a supply chain stays agile in the absence of a virtual chain, is worthy of investigation.

Indonesian banana supply chains operate in an informal economy. Members of the supply chains are not registered and, thus, they do not pay taxes. Activities and operations are carried out with the absence of clarity of regulations. Members are generally self-financed and low-based in capital. Market situations are competitive. There are four main reasons for this. First, there is no entry barrier into the industry since it is in the informal economy. This means anyone is free to join and leave. Secondly, it does not require much capital to join the supply chain network. Thirdly, with a population of over 250 million people in Indonesia, limited job positions and a high rate of poverty, the informal economy provides opportunities for those low in capital or unemployed. Fourthly, banana is a staple fruit in Indonesia. It is used as food to be eaten fresh or in processed forms and also non-food utilization such as cultural ceremonies. The traditional operations in a banana supply chain signify that the process is done with minimum input; a minimum that makes collaboration uncertain. The level of uncertainty is high due to supply-and-demand variation, absence of legal contracts between chain members, and supply disruption. The current study will provide insights into:

- (1) Managing relationship in an informal economy,
- (2) The influence of norms in shaping relationships in order to build competitive advantage,
- (3) Network governance in regard to gaining access to resources in the absence of collaborative activities,
- (4) Managing uncertainty in the absence of risk management strategies/schemes, and
- (5) Developing an agile supply chain in the absence of virtual supply chain.

Given the hypothetical model derived from extant research literature and the research questions in the study, the next chapter is designed to determine a preferred research method that can be applied to move forward the knowledge of supply chain relationships in the banana industry in Indonesia.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the application of an appropriate methodological framework for the study is presented and justified. In the first section, the overall research paradigm is discussed. In the following section, the use of a qualitative research method is explained followed by comments on the exploratory nature of the topic. The following section indicates how the qualitative study is operationalized with particular discussion of the selection of the case study technique, recruitment of research participants, data collection, transcription and translation of the data, data management and data analysis.

3.2 Research paradigm

Rossmann and Rallis (2003) define a paradigm as a shared understanding of reality. Kuhn (1962) refers to it as the underlying assumptions and intellectual structure on which research and development in a field of inquiry is based. Another definition, proposed by Patton (1990) indicates that a paradigm is a world view or a general perspective used as a way to break down the complexity of the real world. Whichever of these definitions is used, the adoption of a particular research paradigm provides a researcher with important assumptions about the way the world is viewed. These assumptions underpin the research strategy and the selection of research methods. Gephardt (2004) argued that any research methodology needs to be consistent with the paradigm views adopted in order to produce the kinds of data and analyses required by the theory in use and the goals of research in the related paradigm.

Generally, selection of a research paradigm or philosophy is based on two dimensions; epistemology and ontology. Epistemology refers to the assumptions about knowledge and how it can be obtained (Hirschheim, 1992) and ontology refers to the assumptions researchers have concerning the nature of reality (Saunders, Lewis, & Thornhill, 2007). Ontology is divided into two categories; objectivism and subjectivism. Objectivism holds that social entities exist in reality external to social actors whereas subjectivism holds that social phenomena are created from the perceptions and consequent actions of social actors (Saunders et al., 2007).

Creswell (2003) suggests four categories of philosophies; post-positive, social construction, participatory and pragmatic. Guba and Lincoln (1994) suggest four paradigms; positivism, post-positivism, critical theory and constructivism. Other authors propose three classifications; positivist, interpretive and critical (Chua, 1986; Orlikowski & Baroudi, 1991). In the current study it was determined to follow the Guba and Lincoln (1994) classification; in particular by adopting the constructivism concept.

The major aim in the current study was to understand how members of Indonesian banana supply chains manage their relationships to cope with uncertainties. In reality, every person in a banana supply chain is different. Not only is each person's position in the supply chain different, there are other personal differences such as age and level of experience, and differences associated with their socio-economic environment. These factors tend to influence the way supply chain members construct their individual understanding of, and meaning around, a phenomenon. For instance, a retailer who supplies bananas in a small quantity may be less worried about a decrease in the number of available bananas than a retailer who relies on a large supply of bananas. The decreased volume of supply will affect the two persons differently; thus, their feelings and attitudes toward the phenomenon are different. As such, the construction of reality cannot be separated from the persons who live in it. In other words, knowledge is developed through continuous social interaction.

Since the view of the phenomenon is built by each person individually, the best way to understand and study the phenomenon is by determining how the event is seen from each person's point of view. Saunders et al. (2007) contend that this is how knowledge is developed; viz., knowledge is gained by extracting the meanings of the event from those involved. However, the meanings need to be recognised as subjective when each person constructs his/her meaning differently. The researcher, as an outsider, can study the phenomenon by interpreting the meanings or opinions attributed to the phenomenon by those involved. In doing so, it is inevitable that, firstly, the researcher must adopt an empathetic stance (Saunders et al., 2007) in order to build an interactive link with the research participants who have experienced the phenomenon (Hallebone & Priest, 2009). Once the researcher enters the social world of the participants and collects their constructed ideas and derived information, the researcher is able to construct meanings by interpreting the specific phenomenon being studied (Charmaz, 2006). The views of Saunders et al., (2007) and Charmaz (2006) are consistent with the intellectual traditions of constructivism; viz.,

phenomenology and symbolic interactionism. Phenomenology refers to the way in which persons make sense of the world around them and symbolic interactionism refers to the belief that persons are in a continual process of interpreting the social world around them as they interpret the actions of others with whom they interact and this interpretation leads to the adjustment of one's own meanings and actions (Saunders et al., 2007). Based on the assumptions and roles of the researcher as explained, the current study fits the constructivism philosophy both epistemologically and ontologically.

In management and business studies, constructivism is often referred to as interpretivism because a constructivist's goal is to make sense or interpret the meanings people, in turn, have interpreted from their world (Creswell, 2003). The interpretivist perspective is highly appropriate in business and management research because business situations are not only complex, they are also unique. They are a function of a particular set of individuals and circumstances; consequently, the aim of the researcher is to capture the rich complexity of a social situation. Therefore, from an interpretivist perspective, it has been argued that generalizability is not of crucial importance (Saunders et al., 2007).

3.3 Qualitative research

The choice of a research method is based on the complexity of the issues being studied and the nature of the investigation. The review of the literature (Chapter 2) has shown that the business relationship is influenced not only by uncertainty regarding the business environment but also the norms of workers and the nature of network structures. Each of these factors consists of several sub-factors which are uniquely interrelated to other factors. Such interactions cannot be quantified. Attempts to quantify them will not fully capture the multifaceted dimensions of relationship management. Furthermore, due to the inherent complexity related to the current study it is possible that unexpected information will emerge during the investigation.

The aim in the study is to explore evidence of relationship management holistically and from different perspectives in detail to gain an in-depth understanding of how business relationships are managed; particularly in respect to the banana supply chain in Indonesia. It is considered that this aim will be achieved best by employing a qualitative approach. Such a decision is justified by the work of Doz (2011) who argues that qualitative approaches, due to their theoretically open nature, allow researchers to discover new or hitherto neglected

phenomena worthy of investigation. Furthermore, Doz (2011) contends that this feature is very important in the field of international research where new interesting phenomena emerge rapidly; the approach assists the researcher to identify and understand new phenomena as they arise and to assess the extent to which the phenomena are worthy of further research.

Qualitative methods are suitable for management studies because studies in that discipline area make managers and organizational researchers face complex issues in order to understand how they are managed. Moreover, it is important to be creative and to use a range of methods and techniques to make sense of the complexities. The use of a qualitative study can be described as a naturalistic approach in which the natural setting is identified in as holistic a way as possible in order to understand better the people or events in that setting. The purpose of a qualitative study is to gain in-depth understanding and build theory through the processes of interpretation and understanding (Gephart Jr, 2004; Zuber-Skerritt, 1992).

Rigour in qualitative research can be based on four criteria: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Credibility is associated with the fitness between what the research respondents say and the representation of their viewpoints by the researcher (Chilisa, 2012; Padgett, 2008; Schwandt, 2006). Credibility in qualitative research refers to the authenticity of the research findings (Liamputtong, 2013). It is based on the constructivist assumption that there is no single reality but rather multiple realities that people in their own context have constructed; these realities require authentic representations of the experience that can be seen clearly by the respondents (Carpenter & Suto, 2008). Thus, the research evidence is credible if it represents, as adequately as possible, the multiple realities revealed by the participants in the research (Chilisa, 2012). Improving the credibility of qualitative research can be done in various ways including purposely and carefully selecting research participants for their knowledge and unique characteristics, presenting the multiple realities held by the research participants as accurately and adequately as possible, and by triangulation (Carpenter & Suto, 2008; Chilisa, 2012).

Transferability refers to the generalization of inquiry (Chilisa, 2012; Padgett, 2008; Tobin & Begley, 2004). Transferability in qualitative research emphasises theoretical or analytical generalizability of research findings in that the theoretical knowledge obtained from qualitative research can be applied to other similar individuals, groups or situations

(Carpenter & Suto, 2008; Padgett, 2008; Sandelowski, 2004). Transferability of qualitative research findings can be highlighted through sampling strategies and thick description of the research setting (Chilisa, 2012).

Dependability is the measure concerned with the fitness of the data from which they have been derived (Carpenter & Suto, 2008). Dependability of qualitative research is gained by having an audit trail that allows readers to examine the adequacy of the research process (Carpenter & Suto, 2008; Chilisa, 2012; Padgett, 2008; Tobin & Begley, 2004). The audit trail indicates that the processes of the research are clearly documented as well as traceable (Liamputtong, 2013). This can be done by providing a thick description of methods used in the research, the triangulation of methods, participants or theories, and peer review (Chilisa, 2012).

Confirmability is the term used to indicate that data, the interpretation of the data and the development of information are linked readily to the data (Chilisa, 2012; Padgett, 2008; Tobin & Begley, 2004). Confirmability is seen as the degree to which the findings are controlled by the research participants and the condition of the inquiry rather than by the biases, motivation, interests or perspectives of the inquirer (Lincoln & Guba, 1985). Reflexivity, triangulation and auditing enhance the dependability of qualitative research (Chilisa, 2012).

In this study, the major topic is directed to the actual issues and/or problems faced by members of traditional supply chains. Since participants in the study are from traditional supply chains, the quantitative components of the questionnaire were considered less applicable; the main reasons being:

- (1) Traditional supply chain members do not have written records of their business activities, including of their production, expenses and revenue. Thus, they do not have a valid answer, or respond, to quantitative questions.
- (2) Participants in the study are heterogeneous because they are from different regions, educational background, level in the supply chain and level of experience. Potentially, these factors have substantial and idiosyncratic influences on their answers.
- (3) Participants are considered to be more likely to respond to a set of questions during an interview session, resulting in the collection of qualitative data
- (4) Due to the limits on current statistical information on the industry, there is no certainty how many participants may be needed to represent the population of

banana supply chain members. The Indonesian Statistics Bureau only has general records of the number of households involved in the banana industry. There is no determination of how many households or individuals belong to traditional and/or modern supply chains or how many households or individuals work as farmers, middlemen or retailers (Statistics-Indonesia, 2013b).

- (5) Due to an anticipated small sample size for the study, the emphasis turned from relying on quantitative data into using qualitative data as the main source of data.
- (6) The research in the study, therefore, is exploratory in nature rather than confirmatory.

3.4 Exploratory study design

In addition to there being a substantial body of literature on responding to uncertainties, discussion in Chapter 2 raised the issue of strategies available to those charged with managing the dynamics of the market. Also, the importance of close coordination and agility were discussed as means for improving supply chains; concepts developed in the context of formal, modern and virtual supply chains (Economist Intelligence Unit, 2009; Lin et al., 2013; Roberts & Grover, 2012). However, informal economies may be quite different to formal economies and, as a result, the application of these concepts in informal economies may be ineffective. Little is known about the dynamics of the market in an informal economy, or about how supply chains managers respond to the market in an informal economy. Therefore, the current study is set to investigate how the persons in traditional banana supply chains manage their relationships within a dynamic market. Because the study commences by generating ideas from the research participants as to what constitutes a dynamic market in their distinct context of the banana supply chain in an informal economy, the study can be described as falling under the design of an exploratory study.

An exploratory study is viewed as a means of finding out “what is happening; to seek new insights; to ask questions and to assess phenomena in a new light” (Robson, 2002, p. 59); i.e., it allows the researcher to clarify understanding of a problem or phenomenon (Saunders et al., 2007). In order to explore how supply chain persons manage their relationships within a dynamic market in an informal economy, data will be collected directly from participants in a banana supply chain. The banana industry is the biggest fruit industry in Indonesia; an industry dominated by traditional supply chains which adequately represent the informal economy.

The focus on qualitative exploratory research indicates that the decision has been made to forego the option of quantitative exploration; largely, the decision was made because the conducting of a quantitative study was not feasible in relation to the topic or economy in Indonesia. Also, a quantitative study may well require substantially more time and resources than currently available. There are numerous banana traders in Indonesia, though specific Indonesian statistics on the industry remain limited; e.g., current, up-to-date statistics are rarely available. There are only general records of the number of households involved in the banana industry, and these do not distinguish how many households or individuals belong to traditional and/or modern supply chains. Furthermore, the records do not identify the numbers of different types of persons in the banana industry; e.g., banana farmers, middlemen or retailers.

For the authenticity of data in the current study, it is crucial to gain matching information from members of a supply chain. This means research interviews should be conducted with persons who operate consecutively along the supply chain; e.g., farmer-collector, collector-wholesaler, wholesaler-retailer, retailer-customer. Potentially, this provides a great challenge because supply chain members are located in different places, often in different provinces or islands. Generally, wholesalers and retailers may be found easily in every city, but farmers and collectors are not. Usually, farmers live in villages located far from the city and, often, are not easily found. Similarly, collectors are not easily found because they are quite mobile and, often, do not have a permanent business site. Such difficulties may well suggest some of the main reasons why similar studies have not been undertaken previously.

3.5 Case study and grounded theory

While case study and grounded theory are often described as two distinct research strategies, it is contended that they can be combined. A qualitative case study can be designed within a constructivism paradigm that uses constructivist data analysis approaches (Lauckner, Paterson, & Krupa, 2012). This combination has been undertaken in the current study after reviewing the strengths and weaknesses of both strategies.

Case study is one of the qualitative approaches commonly used as a research strategy in sociology, psychology, community planning, social work and business studies. Also, it has been used extensively in economic areas to study a structure of a given industry or the economy of a region or to gain understanding of complex social phenomena in real-life

contexts such as individual life cycles, international relationships, managerial processes, industrial growth and organizational behaviour (Yin, 2009). Furthermore, Yin (2009) argued that case study is appropriate to examine contemporary phenomena especially when the boundaries between the phenomena and their context are not clearly evident; this boundary situation describes the specific context of participants in banana supply chains. Case study methodology can be undertaken as multiple case studies to allow investigation across cases (Beverland & Lindgreen, 2010; Johnsen & Ford, 2006; Nonthaleerak & Hendry, 2008) or as a single case study to enable the researcher to become immersed into the intricate rich details of the case to allow for the identification of crucial variables and inspire new ideas (Siggelkow, 2007). On the other hand, data analysis of a case study can be poorly defined (Yin, 2009).

Grounded theory is a well-established analysis method for generating substantive theory (Charmaz, 2006; A. Strauss & Corbin, 1998); this makes a grounded theory approach fit with the objectives in this study. However, grounded theory does not detail data collection techniques but, rather, outlines an analytical process (Charmaz, 2006; A. L. Strauss, 1987). Therefore, by combining the two approaches in the current study, the researcher will be able to capture emerging contentious issues arising during data collection and update data analysis processes through a constant comparison method in order to deepen data analysis while maintaining the context of situations, and the integrity of data through participants' voices (Lauckner et al., 2012). This combining strategy is supported by Doz (2011) who holds that management studies entail complex issues that researchers conducting qualitative study in this field need to be creative and use a variety of methods to make sense of the complexity. Furthermore, the use of grounded theory in interpretive-based qualitative study provides deep insights and understanding of the social and organizational context of the study which, again, leads to rich research findings (Japhet & Tar, 2013).

3.5.1 Case selection and participant recruitment

In the current study, it was decided to use the case of dyads in four separate supply chains. Although one supply chain may be sufficient to identify issues, data, information and variables related to the topic, it is acknowledged that each participant in that supply chain could have quite different interpretations or viewpoints. As such, it was deemed important to interview multiple chain members who were representative of major positions in the supply chain. Moreover, since research respondents are prone to subjectivity and biases, having informants from a number of supply chains would allow the researcher to generate richer information. Therefore, to gain rich detail in this study, research participants were selected

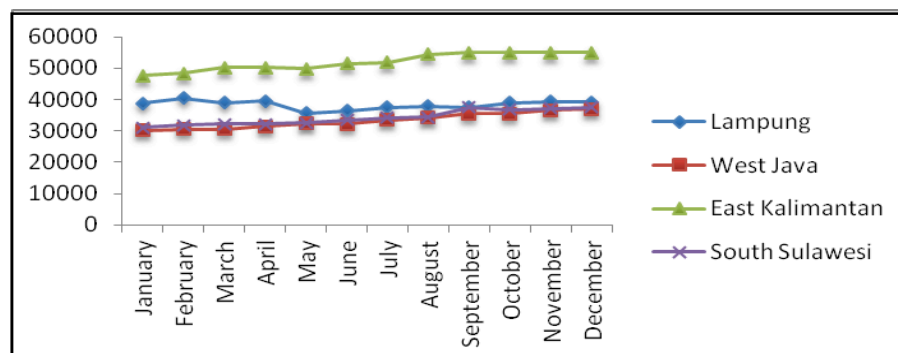
purposively from supply chains in four different provinces; viz., West Java, Lampung, South Sulawesi and East Kalimantan.

The differences among the four locations were considered useful in reflecting on the differences in supply chain management; e.g., in natural condition, capacity to produce bananas and price. West Java is located in Java island, Lampung in Sumatra island, South Sulawesi in Sulawesi while East Kalimantan is in Kalimantan island. The differences in location may well imply differences in climate, soil and agronomical conditions which, in turn, can affect the quality, variety and quantity of banana produced.

In terms of capacity to produce bananas, West Java is consistently the number one banana producer in Indonesia. Lampung has been consistently in the top five producers over the last 10 years, although it sat in seventh spot prior to that. South Sulawesi also is in the top 10 of the list and what makes this province stand out is the fact that it is the only province in Sulawesi Island that produces over 100.000 tons of bananas each year. East Kalimantan, although it doesn't make it to the top 10, also is an important banana centre as it produces over 100.000 tons of bananas annually from time to time. Although the selected provinces rank differently in the list, each one of them is a major banana producer among other provinces in its island (Statistics-Indonesia, 2012).

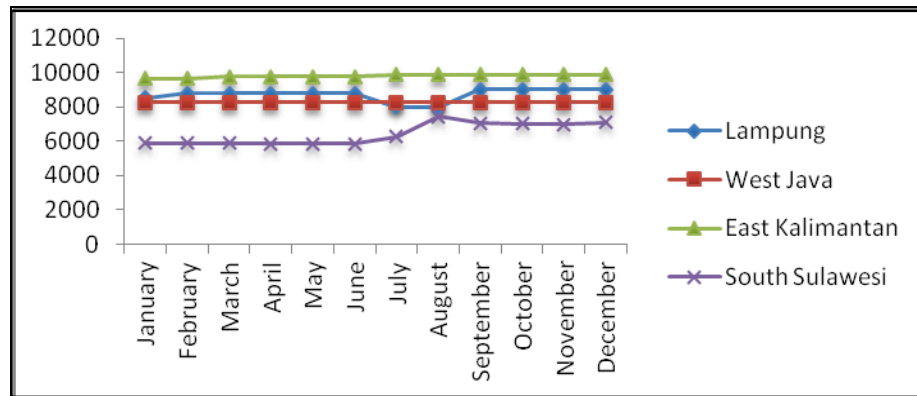
Banana trading is different in the four provinces. Data from the statistical bureau show that out of the four locations, farm gate price in East Kalimantan consistently increases and is higher than the rest with more than Rp. 40,000 per 10 hands, followed by Lampung. Meanwhile in South Sulawesi and West Java farmers receive a similar price (Figure 3.1, below).

Figure 3.1. Farm Gate Price of Banana (Rupiah/10 hands), 2009



Downstream, the retail price in East Kalimantan is higher compared to the other provinces. Retail prices in West Java and Lampung are similar. South Sulawesi, on the other hand has prices much lower than the rest for more than six month before it goes up from August to December (Figure 3.2 below).

Figure 3.2. Retail Consumer Price of Banana (Rupiah/hand), 2011



The recruitment of participants followed the ethical guidelines outlined in the NHMRC National Statement of Ethical Conduct in Research Involving Humans, particularly those issues relating to data collection and reporting. Potential participants were (1) clearly informed of the aims of the research at the time they were invited to participate, (2) made aware that they may withdraw from the study at any time without penalty, (3) guaranteed confidentiality, and (4) acknowledged for their cooperation and contribution in a way that retains confidentiality. Ethical approval for the study was obtained in December 2012.

There were no specific, limiting criteria used in the selection of research participants. Generally, the basic criterion was for a participant to be involved in a banana trading supply chain. However, for the purpose of data analysis, it was expected that the composition of participants should consist at least of farmers, collectors, wholesalers and retailers; i.e., these participants represent the dyads in banana supply chains mentioned earlier in Chapter 3. As such, they are key informants on aspects of relationship management in their supply chain. Key informants are different from other informants by nature of their position in the industry and their information-rich connection to the research topic. They are the individuals who possess special knowledge, status or skills who are willing to share their knowledge and skills with the researcher (Goetz & LeCompte, 1984). Similarly, Redwood, Lloyd, Carr, and Hancock (2007) used key informants approach in their case study because of its

collaborative nature, its flexibility and the potential to generate insights into the how the participants in their study develop their roles and relationships within the specific context where the participants operate. The use of key informants was based on three main reasons. Firstly, interviewing key informants allows the researcher to gather information efficiently. Some studies are bounded by limited resources that force the researcher to reduce the number of informants. In the current study, the use of key informants will provide the researcher with needed information in a cost-effective manner. However in such conditions, the researcher is encouraged to develop a relationship with the key informants to ensure the richness of the information gathered (Gilchrist & Williams, 1999; Gregor & Galazka, 1990). Secondly, key informants provide the researcher with access to information that is unavailable except from key informants; for example, information about the changes in farming is only available from senior farmers (Gilchrist & Williams, 1999). Thirdly, key informants aid the researcher in gaining particular understanding or interpretation of certain information that otherwise might not be fully appreciated. Thus, key informants help the researcher to expand, modify and clarify interview answers of what, when, who, why or how in order to transform the researcher's limited understanding of the issues. As such, key informants become a research collaborator or a translator, both literally and figuratively (Goetz & LeCompte, 1984; Redwood et al., 2007; Schatzman & Strauss, 1973).

Participants were selected through the technique known as snowball sampling. This was done by approaching the members at both ends of a supply chain; viz., the farmer and the retailer. The farmer was asked for a reference to approach their buyers. Similarly, a retailer was asked to identify his wholesaler. By this method, the researcher was able to identify matched dyads for interview; having the matched participants of a dyad enhanced the internal validity of available data by allowing the researcher/interviewer to verify information from one person by matching it with that of the business partner. However, despite not all potential participants being willing to be interviewed, the information from unmatched, individuals was adequate and complete and, therefore, useful for checking against that of similarly positioned persons in other supply chains.

3.5.2 Data collection

Information gathering was guided by a set questionnaire consisting of questions regarding the type of information required within the context of the hypothetical model (Chapter 2 and the major and minor research questions. A set of interview questions was developed prior to data collection, designed to facilitate the semi-structured interviews to members of the

banana supply chains. The questionnaires consisted of several types of questions, for instance:

(1) Interpretive questions, such as:

- Within the supply chain, what does business satisfaction mean to you?
- In what ways is trust important in the supply chain?

(2) Specific questions, such as:

- What labour do you employ to assist in progressing the bananas along the supply chain?
- Do you have a preferred supplier on whom you depend?
- Does your position in the supply chain require you to have a preferred customer for the bananas?

(3) Operational questions, such as:

- On which of the following do you keep data in your records?
 - Quantity of each lot sent?
 - Quality of each lot sent?
 - Location of each lot of bananas purchased?
 - Location of each lot of bananas sent?

In addition to the standard interview questions, it was anticipated that some follow-up questions would be used as a result of the interaction with participants. In effect, while the initial questions were informational in a general nature, the follow-up questions were more specific to particular issues which emerged during the interaction. As such, the interviewer (researcher) recorded and considered participants' information as they verbally conveyed it. Once participants had provided a response to a general question, the interviewer was in a position to follow-up the general answer with a more specific enquiry. The follow-up questions allowed the researcher to better understand the nature of the supply chain management relationships by enquiring about emerging issues. This is consistent with the constructivist approach to case study (Lauckner et al., 2012; Stake, 2005).

Generally, the development of follow-up questions was welcomed positively by the participants because the interviews were conducted in a friendly, light and familiar atmosphere. Every participant was approached in a way that was both culturally and socially appropriate. The relationship established was not between a researcher and participants, but rather of a person interested in management relationships and prepared to learn about the

pros and cons of the supply chain. Participants tended to see the interviewer as a person from an older generation; viz., one to be respected as one would respect one's parents.

Data collection was planned to support data triangulation through the use of multiple sources of evidence. Primary data was collected through semi-structured interviews to capture important insights that may not be covered by the pre-set questions. The interviews were conducted face-to-face; the technique allowed the researcher to observe and record nonverbal as well as verbal behaviour (Sekaran, 2003). Each individual interview was designed to allow for in-depth probing; nevertheless, it was considered necessary to plan for a minimum time limit of approximately one hour, with a planned maximum time of ninety minutes. Every interview was audio recorded to ensure all detailed information was accurately recorded. Secondary data was gathered from reports published by the Statistical Bureau of Indonesia, both in printed form and online. In addition, during data collection, the researcher undertook direct observation and document review. Direct observation refers to observation on the actual process and condition of the participants' workplaces where the interviews took place.

Document review was done following the interview to identify whether more information or clarification was required from the participants. The trusting relationship between the researcher and research participant allowed the researcher to visit participants or contact them through mobile phone should more information be needed.

Interviews occurred in the actual locations of the participants' workplaces; i.e., where participants undertook their work or related with business partners in the supply chain. A two-hour time span was allocated for meeting, interviewing, discussing and completing a contact with a research participant. During this time, the researcher was able to conduct direct observation and allow for the recording of events in real time, thereby supporting the reality and contextual aspects of observations. The collection of data occurred between January 2013 and April 2013. Overall, there were 26 participants who included 12 farmers, 2 collectors, 5 wholesalers and 7 retailers. The number of participant did not meet the original concept of 'matched pairs' because some participants transact with a various number of people in the supply chain. For instance, one collector buys bananas only from one or two farmers while another collector buys from more than 50 farmers in nearby villages. Similarly, one collector may deliver bananas bought locally to one wholesaler within the island while another collector ships bananas not only to a local wholesaler but also to another

wholesaler in another island. These situations, on the other hand, reveal various realities within the traditional banana supply chains and thus, enrich the findings.

3.5.3 Transcription and translation of data

All interviews were conducted in the Indonesian language and audio recorded. Based on the recorded verbal interview, the researcher produced the transcript which has versions in both languages for the purpose of future verification. In order to verify the translation, a back-translation method was applied. The English version of the data was given to native Indonesian students fluent in English for back-translation to the Indonesian language (Brislin, 1970; Eremenco, Cella, & Arnold, 2005). The translations were compared, then, to the original text from the participants. Comparison of the original scripts and the back translations showed more than adequate similarity, thereby indicating to the researcher that the English translations were valid.

3.5.4 Data management

There are various computer software packages that can be used in research projects for editing, coding, storage, search and retrieval, data linking, memo making, content analysis and graphic mapping that might benefit researchers. However no computer software will do the overall analysis process for a researcher. Software may support the research process but the ideas, intellectual effort and analysis must come from the researcher conducting the study (Weitzman, 2000).

In the current study, Microsoft Excel was used to support the management of interview data; these were put in Microsoft Excel columns according to themes, sub-themes and codes.

3.5.5 Data analysis

Data were organized in Microsoft Excel in a format that would assist in the analysis at the same time. The process is described in the following steps:

1. Data categorising

In Microsoft Excel, the sheets represent main themes; the themes themselves represent categories identified from the literature study. The headings on each sheet represent initial codes for each category, such as the meaning of trust for participants or commitment to the wider supply chain. All related information derived from the text provided by participants is placed under each code. Every key word in a participant's text was highlighted in red for the researcher to identify quickly.

2. Development of categories and codes

As the quantity of data increased, the number of categories and codes tended to increase. Also, some information contained a key word that could be allocated to more than one category and be an indicator of additional categories. For instance, a participant's view that her commitment to her business partner was shown in her willingness to share a financial loss can be seen as a form of empathy. This kind of information, then, can be adjudged to fall also under a new code; 'form of commitment' leads to the new category of 'social capital'. At the same time, a new memo can be made for 'relationship between relationship commitment and social capital'. As each datum is examined and information is categorised, new data are available for comparison with the existing data to identify data gaps for further analysis.

3. Data analysing

Every small item of data was treated with thorough thinking before categorising it as information. The thinking process reflects the constructivist pattern shown in Table 3.1.

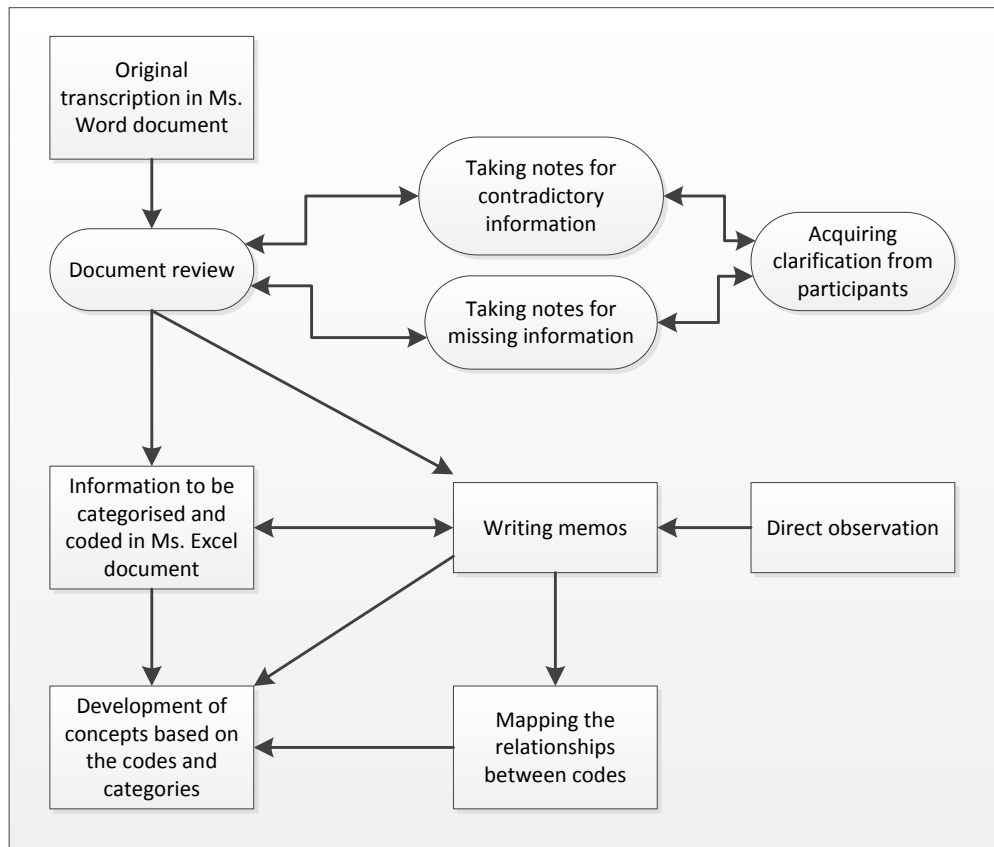
Table 3.1. Example of Coding and Interpretation Thinking

Sub-theme	Focused Coding	Initial coding	Excerpt/ Information	Implicit meaning/ social construction
Coping with supply uncertainty	<ul style="list-style-type: none"> • To have multiple suppliers 	<ul style="list-style-type: none"> • Always have banana stock • Playing irregular supplier against one another (adversarial transaction) • Multiple suppliers 	<p>I never run out of bananas. If the Palopo supplier doesn't have bananas, I can find other suppliers. It's easy to find an alternative supplier. It's easy because I pay higher. So if bananas are running out, just increase the price, easy. Yes, we pay the price when banana is in a shortage because they (alternative suppliers) certainly look for higher revenue themselves</p> <p>– <i>Retailer</i></p>	<ul style="list-style-type: none"> • It's more expensive buying from irregular suppliers than from a regular supplier • Alternative suppliers are plentiful
Agility driver	<ul style="list-style-type: none"> • Storing process does not change for years 	<ul style="list-style-type: none"> • Simple storing process • Storing process does not change for years • Separation of withered and non-withered bananas • Fifo system • Bananas are brooded before selling them to buyer 	<p>Bananas are stored simply, from the past until now. We separate the withered from the new ones because the withered ones ripen quickly. We brood the withered ones first to prevent decaying (before selling them). By brooding the withered ones, they will ripe fast; we can sell them quickly and make money out of it</p> <p>– <i>Wholesaler</i></p>	<ul style="list-style-type: none"> • Storing and ripening process is simple, traditional and low cost. Absence of changes in storing process indicates that it will stay the same for a few years in the future
Changes	<ul style="list-style-type: none"> • Supply of banana (from regular supplier) is decreasing • Scarcity of banana leads to direct sourcing • Loss of customer due to 	<ul style="list-style-type: none"> • Bananas in the past were abundant • Scarcity of banana leads to direct sourcing • Loss of customer (caterer) due to irregular supply • Supply of banana (from regular 	<p>In the past when bananas were abundant, I used to buy bananas through my supplier's brother. But now since banana is rare, I have to directly source from the collector. I used to sell to catering people because I used to have many bananas that every day the caterer came here. They came here every day because I have banana that they didn't buy from other markets. Now things are different. If the volume of</p>	<ul style="list-style-type: none"> • Continuity of supply is important in keeping customers • Retailer relies only on regular supplier alone • Being out of stock for a few days is acceptable • Wholesaler direct sourcing emphasizes the

	irregular supply of banana	<p>supplier) is decreasing in quantity</p> <ul style="list-style-type: none"> • Irregular delivery • Irregular delivery creates stock-out days 	<p>banana in the past was 100%, now it's far down to 60%, so it used to be more crowded. In the past, banana delivery came twice a week, now only once a week and that even not regular, so they delivery doesn't always come in a week. Nowadays I have many days being out of stock</p> <p>– <i>Wholesaler</i></p>	<p>important role of collector as being the closest to the banana producer</p>
Competitive situation	<ul style="list-style-type: none"> • Competition is increasing 	<ul style="list-style-type: none"> • Competition is increasing • Increasing number of competitors 	<p>Competition will definitely be more intense. There is no way for competition to go slow or for number of competitors to decrease</p> <p>– <i>Wholesaler</i></p>	<p>Competition marked by increasing number of traders will always increase</p>
Responding to competition	<ul style="list-style-type: none"> • No response to competition • Do not think about competition 	<ul style="list-style-type: none"> • No response to competition • Do not think about competition • Being in a safe/competitive position • Importance of supplier's performance • A few regular suppliers switch to other buyers 	<p>I respond to it casually (biasa aja), I don't think about it that much. It depends on my supplier's performance. When we have many suppliers, we are safe. There are a few of my suppliers who bring their bananas to other collectors who offer higher price but it's very few, only 2% doing it</p> <p>– <i>Collector</i></p>	<ul style="list-style-type: none"> • Supplier is the source of competitive advantage. • Suppliers' loyalty strengthens competitive position
	<ul style="list-style-type: none"> • No response to competition 	<ul style="list-style-type: none"> • No response to competition • Try to do the best in selling 	<p>That's fine because each person has his own fortune. I can only hope that my products are sold</p> <p>– <i>Retailer</i></p>	<ul style="list-style-type: none"> • The belief that everyone has right to earn money makes people less worried about competition
	<ul style="list-style-type: none"> • Failure of transaction is destiny 	<ul style="list-style-type: none"> • Regular buyer is free to switch to other seller • Failure of transaction is destiny 	<p>If my preferred (= regular) buyer happens to buy bananas from other people along the way, well I don't mind that because I believe it's not my fortune yet</p> <p>– <i>Farmer</i></p>	<ul style="list-style-type: none"> • Long-term relationship does not guarantee for regular transaction • Success in business is influenced by destiny

Besides coding, diagramming was also used to map the relationships of codes and categories. The process of data analysis is summarized in Figure 3.3.

Figure 3.3. The Flow of Data Analysis Process



3.6 Conclusion

In this chapter the methodological framework for the current study has been discussed. Exploration study, which is constructivist in nature, was chosen for the study because it can utilize a combination of two research strategies, case study and grounded theory; the value is that each strategy complements the other. The potential weakness of the data analysing process in a case study is balanced by the use of powerful analytical tools of grounded theory, while the potential difficulties of an unclear data collection issue in grounded theory is covered by the data collection protocols of case study methods.

Also in this chapter there is discussion about case selection. Although it is a single case study, the participants are mainly from matched dyads of various supply chains. This allows for rich data generation and internal validity enhancement. The stages of the data analysis process and examples of interpretation thinking have been provided to indicate the analytical process used in the study.

In the next chapter, the results of the study are presented.

CHAPTER 4 INTERVIEW RESULTS

Chapter 4 is used to report and describe the results of interviews within the context of three supply chain dyads; the farmer-collector, the collector-wholesaler and the wholesaler-retailer interface relationships in the Indonesian banana industry supply chain.

A supply chain network is a chain of dyads that in order to explore how the supply chain manages its B2B relationships, it is important to examine every individual relationship dyad within the supply chain. This allows the researcher to understand how the relationships along the chain of dyads are managed. In total, there are 26 participants in this study that consists of 12 farmers, 2 collectors, 5 wholesalers, and 7 retailers. The role of each participants, their location, gender, and size of business are presented in Table 4.1.

Table 4.1. The Profile of Participants

Participant	Location	Gender	Size of business (total of banana hands traded monthly)
Farmer 1	Lampung	Male	500
Farmer 2	Lampung	Male	700
Farmer 3	Lampung	Male	320
Farmer 4	West Java	Male	600
Farmer 5	West Java	Male	680
Farmer 6	South Sulawesi	Male	600
Farmer 7	South Sulawesi	Male	300
Farmer 8	East Kalimantan	Male	2,000
Farmer 9	East Kalimantan	Male	2,000
Farmer 10	East Kalimantan	Male	2,400
Farmer 11	East Kalimantan	Male	1,000
Farmer 12	East Kalimantan	Male	3,000
Collector 1	Lampung	Female	8,000
Collector 2	South Sulawesi	Female	10,000
Wholesaler 1	West Java	Male	12,000
Wholesaler 2	East Kalimantan	Female	17,200

Wholesaler 3	East Kalimantan	Male	16,000
Wholesaler 4	South Sulawesi	Male	40,000
Wholesaler 5	West Java	Male	8,000
Retailer 1	South Sulawesi	Male	1,800
Retailer 2	South Sulawesi	Female	4,000
Retailer 3	South Sulawesi	Female	3,800
Retailer 4	West Java	Male	11,000
Retailer 5	East Kalimantan	Female	3,600
Retailer 6	West Java	Male	2,000
Retailer 7	East Kalimantan	Male	4,800

4.1 Farmer-Collector Dyad

Given the primary concern in the current study of the management of relations across the supply chain, the chapter is begun with an examination of the supply chain activities relative to the farmer-collector dyad. The relevant activities reported include the selection of partners, production, product flow, financial flows, co-ordination and communication, supply chain uncertainties, agility, agility capabilities and those associated with the personal relationship in the farmer-collector dyad.

4.1.1 Selection of partners

Generally, collectors may have from 50 to 100 different banana farmers from which to choose, whereas farmers tend to sell their bananas only to a few collectors. Of the 12 farmers who participated in the current study, five admitted to trading with only one collector, one farmer used two collectors, three farmers used three collectors and the remaining three farmers said the number of their collectors varied because they were prepared to trade with any collector.

The selection of partners tends to apply only to farmers and not collectors. In the villages, the number of farmers outweighs the number of collectors. However, each farmer tends to produce a very small quantity of bananas compared to the overall shipping capacity; thus, collectors need as many bananas as they can get. In other words, the more farmers they have, the better.

Farmers admitted that they used particular criteria in selecting their preferred collector; criteria that can be described as ‘operational’ or ‘relational’. Operational criteria include price and payment method; relational criteria include kindness and fussiness:

- Price

Price is important to farmers. However, there is no formal standard of the right farm-gate price so farmers are left to use their personal judgment of what should be the right price for them.

This is my first time coming to Mrs. Uti., to see how much is the price, is the price suits me or not. (Farmer 2)

Based on price. In terms of fair price, my main buyer gives me fairer price. I prefer those who give me the highest price. (Farmer 3)

- Payment method

Generally farmers operate with very a small capital which results in a small harvest. Consequently, they rely on the revenue of today’s harvest to start the next cultivation. In addition to that, farmers are very simple in that they don’t want to worry about not having money or having to hold bananas. In other words, they just want ‘peace of mind’. Therefore, cash is the preferred method of payment:

As farmer, I want buyer who pays me cash. (Farmer 6)

Payment. I used to sell my bananas to another collector but I stopped it because of financial reason. When I bring my bananas to his place, he sometimes pays me cash, sometime the next day. (Farmer 1)

So I prefer cash because it doesn’t lead to any problem. Once the bananas leave my house, they become his responsibility. (Farmer 12)

- Collector’s quick response

Soon after harvesting, farmers call collectors to arrange collection and settle the transaction. The sooner the collector comes the better it is for farmers because it means farmers would receive money for that day’s harvest; money that can be used straightaway for their daily family’s needs.

The current collector (buyer) is better because once I call him to tell him that bananas are ready for collection he comes right away. (Farmer 12)

- Proximity

Another farmer selects his collector based on distance. The closer the collector, the better it is for the farmer not only for efficiency in regard to logistics, but also for the farmer's other needs. Farmers have a 'waiting period' from when they start growing crops until they are able to harvest and sell them. During that period, farmers who do not have other sources of income often turn to collectors to borrow some money for daily household needs while promising collectors that they will settle the debt with the forthcoming banana harvest

The main reason for choosing that buyer is because they are my neighbors. The consideration is simply because they live close to me. If I am unexpectedly and urgently in need of money, for example Rp. 50,000, going to borrow money from a far away buyer will incur Rp. 20,000 cost. So it's better to borrow from the one who is close, with no additional cost. We have to think further. One day we need to buy things for a function such as thanks giving and at the same time the harvest is not ready. In such a sudden need, we borrow from buyer.
(Farmer 4)

- Fussiness

Farmers associate a lack of fussiness with easy, pleasant, quick and smooth transactions where farmers experience no rejections, no comments and no further requests from collectors.

What is important is he is good. If he becomes fussy, I might find other partner
(Farmer 10)

I like friendly buyer, those with short transaction, I mean buyers who don't take a long time in determining price.
(Farmer 7)

- Trust

Another criterion that farmers use in choosing a collector is trust; particularly in regard to hand counting. Bananas are delivered in bunches and each bunch has seven to 10 hands of banana. During the transaction, both parties have to agree on the total hands in the lot before they proceed to payment. Farmers usually count the total hands when they prepare bunches for collection; when the collector arrives, he can count the number of hands or simply take the farmer's version of the total. The farmers often associate trust with minimal difference in hand counting. However, this applies for farmers who trade over 500 hands of bananas. The more the number of hands, the more likely it is for either the farmer or collector to miscount.

I deal with my preferred collector because we have good communication and trust regarding calculation.
(Farmer 8)

On the other hand, collectors do not actually select farmers. In other words, collectors accept all bananas that farmers bring them due to the farmers' scale of farming. Collectors who rely on very small scale farmers to bring them bananas on motorcycles do not reject anything that a farmer delivers since rejecting will result in losing a loyal farmer. Although collectors tend to accept bananas from all farmers, they do have preferred sources of supply. Generally, preferred farmers are selected based on the quality of banana and farmer's willingness to support the collector.

- Product quality

Collectors do not reject any bananas from farmers; they take all bananas despite the quality. The quality of bananas greatly varies in a bunch; banana fingers of upper hands are bigger in size and get smaller in lower hands. Although collectors take all bananas, some collectors pay higher for bananas of premium quality than for the regular ones.

I accept all banana farmers drop in because they are regulars. I immediately accept new suppliers who want to become regular. There is no selection process. I tell them the standard I want. But if they bring immature (below standard), I buy them too. Too big bananas or too small bananas I accept. No waste/rejection. I am not picky, I accept all bananas. But the price is different between big bananas and small ones. So the difference is in the price

(Collector 1)

- Farmers' support

Once they have some banana supplies, collectors cannot hold them for too long due to the lack of cooling systems; they have to find more bananas quickly in order to maximize the delivery capacity. For this reason, collectors provide opportunities for farmers who are willing to work casually for them to search for bananas from other farmers should demand arise.

Sometimes if I call him to say: "De, I am about to ship bananas." Then he say: "Yes mam, I will find you bananas." Then he delivers bananas here. Those on the car are his bananas. Yesterday I called him saying I want to mount and he hurriedly brought bananas here. In terms of price, I pay different price to him compared to others because he is favourite
(Collector 1)

Thus, for the collector, preferred farmers are not only those who are faithful but also those who are willing to work for the collector with a quick, flexible response. To collectors, these

farmers are strategically important because without the help of such farmers, collectors have to deal with the issues of waste and transport costs. If the number of bananas does not meet the maximum capacity of the shipping truck, it means a higher transport cost. But if the collector holds the bananas too long in the warehouse, they will ripen and, by then, their value decreases.

Bananas brought by famers will be stored in the shed. They will be shipped when the required number is met. Normally they are stored for 2 to 3 days. Storing longer will make the banana ripe. Some of the bananas do show ripening signs or ripen within 2-3 days because they are harvest at a very mature stage.
(Collector 1)

Although farmers focus on money in selecting a partner and collectors focus on quality of product in determining the price, there is one common criterion both parties highlighted; viz., faithfulness. When both parties were asked their criteria for a preferred partner, both agreed that faithfulness was an important factor.

I don't like inconsistent buyers, sometimes they come but sometimes they don't come.
(Farmer 7)

My preferred buyer buys my banana when banana price is low and high. Because there are many banana buyers but the problem is, they come only when the price is good. They don't buy our banana when the market price drops. That is why we need to have regular buyers. Non-regular buyers will toy with us but a regular buyer will buy our bananas when the price is high and low. As for me, even if I have to sell my banana at Rp.200 less for each hand, I don't mind as long as they are sold.
(Farmer 12)

Yes. Mas Ade. He is good, never sell his banana to others
(Collector 1)

Banana is non-seasonal; however, the demand is not stable throughout the year, especially in some provinces where banana demand decreases due to the presence of seasonal fruits such as rambutan or durian in the market. Therefore, having a regular consistent collector is important to farmers. Having regular collectors allows farmers to have a steady income during such periods and consistent buying also increases the farmer's level of trust about a collector.

He is different from other buyers because he is consistent buying from me although sometimes the quality of my banana is not very good.
(Farmer 7)

I never switch to other people during that time which make him trust me. Whenever I harvest, it is always sold (buyer always takes all), so there is no incidence that weaken trust.
(Farmer 8)

4.1.2 Supply chain activities

4.1.2.1 Production

The production of banana is characterized by:

- Varied size of land

The size of banana production varies. Five out of the twelve farmers grow banana in less than 0.5 hectares, three farmers cultivate in 1 hectare of land, one farmer has two hectares of land and the remaining two farmers grow banana in more than 2.5 hectares.

- Diverse seed

There is no uniformity of seed. The agricultural extension authorities are unable to provide seed of good quality. Therefore, all farmers use seed from their own plants or obtain it from other farmers.

- Simple production

There is no standard of method of cultivation; farmers use their own methods according to their own resources, principles or experiences. For instance, some farmers may not use fertilizer because they cannot afford it, while other farmers choose not to use fertilizer so that their bananas do not rely on it.

Fertilizer is given occasionally if I cannot afford it. Having a vast field makes it tough. Second fertilizer is given quite a while after the first one. Once I use fertilizer only twice in a year because of the high cost. (Farmer 12)

I don't use fertilizer because if I give the trees fertilizer I am afraid as time goes the trees are used to fertilizer that they won't bear big bananas without fertilizer. (Farmer 10)

4.1.2.2 Transportation

(i) Product Flow

Generally, the movement of bananas from farmer to collector is simple. Bananas are not packed or transported in refrigerated vehicles. Unripe bananas are traded in bunches which hold seven to ten hands of bananas and are moved by motorcycle or pick-up truck.

(ii) Delivery

There are two types of banana delivery from farmers to collectors, farmers bring their bananas to collectors and collectors fetch bananas from farmers' houses. The difference is

caused by product quantity. Farmers with a small quantity of bananas, approximately less than 100 hands, are able to take all the bananas on a motorcycle. On the other hand, farmers with a larger supply of bananas prefer to wait for collectors to fetch the crop because they do not have any car or pick-up truck to take the bananas to the collector.

(iii) Banana handling

The handling of bananas is characterized by:

- Absence of treatment

Despite the method of transporting, banana bunches are handled without any additional treatment or equipment as they are loaded onto or unloaded from a motor cycle or pick-up truck; this method of handling has been used for a long time mainly because it is low in cost and there is no requirement to change the current method.

- Rough handling

As bunches of bananas are loaded into the vehicle, they are roughly piled on top of each other without any coating to prevent bruising during transportation. In order to ensure that there is no space between the piled bunches, someone normally climbs onto the top of the pile and presses down the piles with his feet. According to the participants, the rough handling is practiced everywhere; it is acceptable since bananas at this stage are unripe and hard, so they are able to sustain rough handling.

4.1.2.3 Storing

Generally, farmers who produce a small quantity of bananas carry their bunches of bananas by motorcycle to the collector's place. Meanwhile, farmers with a larger harvest rely on the collector to pick up the bananas and leave the bunches of bananas in front of their house. Farmers do not have allocated sheds in which to store bananas.

On the other side of the dyad, collectors keep bananas for two or three days in a shed or open warehouse until their supply reaches capacity for transporting. The warehouse is not equipped with cooling; nor is there a cement floor.

4.1.2.4 Payment

There are three methods of payment applied: cash, instalments and by invoice. Collectors pay farmers cash when they pay for the lot being traded on the spot. An instalment payment is used when collectors pay for half of the bananas being traded and pay the remaining

amount during the next transaction. In the last method, invoice payment, collectors take the farmers' banana and pay in the next transaction. Usually, collectors prefer the last two methods of payment when they do not have enough money to pay farmers until they have sold the bananas to their customers.

4.1.2.5 Coordination and Communication

(i) Defining co-ordination

Simple coordination in farmer-collector dyads is reflected in their definition of coordination; according to them, coordination refers to:

- Basic good communication

Dyad members associate good communication with pleasant and easy transaction.

Coordination is having good communication with each other
(Farmer 7; Collector 1)

- Willingness to solve conflicts together

Issues regarding product quality or miscounting sometimes occur after the transaction. Collectors might find the miscounting when they unload bananas in the market or receive complaints from their customers that some of the bananas are infected. These issues are usually settled in the next transaction.

If for example there are some issues or unsatisfactory matters happen, we should discuss it well; sit together and talk things over nicely.
(Farmer 6)

- Exchanging thoughts or ideas and giving feedback

Some dyads have continued for so many years that a farmer and a collector have developed a personal relationship and become good friends. This allows both of them to communicate openly and exchange ideas through their informal meetings.

So in business we have to think far, looking for the future that is why both engaging partner need to coordinate. For me, coordination is like exchanging thought/ideas of each other and also giving feedbacks to each other with the objective for the good of all.
(Farmer 4)

- Having a similar value in regard to the value or condition of product.

Farmers may refer good coordination with shared understanding or being in an agreement regarding the condition of the product based on the actual condition. In other words, coordination is similar to the ability of being truthful.

Both parties have/share similar value on the product. That is to say the product is defective when product is truly defective and to say product is good when the actual product is good.
(Farmer 3)

(ii) Characteristic of coordination and communication

Communication is crucial for both parties to coordinate the flow of products within an appropriate time frame. The coordination and communication in the dyad is carried out rather simply by means of a basic communication device, the mobile phone. Generally, the communication between farmers and collectors is characterized by fragmented communication, limited communication devices, and informal communication.

- **Fragmented communication**

Both parties communicate irregularly, depending on their needs. For instance, when collectors are in need of banana or about to transport, they contact their farmers. When farmers' bananas are ready for harvest, they contact collectors to schedule for collection. There is no discussion regarding any future marketing plan although both parties have been trading for several years.

Me and my preferred buyer never talk or discuss about future plan or strategies or whatever because what business does he have to do with it. Even if he comes at my place and we have coffee together, he never stays long. After coffee and smoking, he leaves.
(Farmer 2)

- **Limited communication devices**

Farmers and collectors communicate mainly through use of mobile phones. Out of 12 farmers, only one farmer admitted that he does not have a mobile phone that he uses to communicate with his collector in person.

- **Informal communication**

The exchange of information between farmers and collectors is usually done casually when they see each other during collection. They do not set a certain time to sit together and discuss business. Sometimes collectors share information regarding price or demand in the market. However, it is conveyed in a relaxed and casual manner as part of daily conversation.

He frequently tells us about the price trends in Samarinda, whether the price goes down or up.
(Farmer 10)

When we sit together chatting, he sometimes tells me that this or that certain variety of banana is in demand at the market. He also tells me his prediction of which variety are still in high demand within 9 months or 1 year. As human, we don't know what will happen in the future, we can only predict.
(Farmer 4)

In this dyad, the limited communication is influenced by four factors: proximity, procuring system where a collector must take all, the lack of bond with farmer, and the adversarial relationships.

- Proximity

Communication is done by each person because, often, both farmers and collector live in the same village and communicating in person serves their needs.

There's no need to use phone because he lives here, close. Here, all are neighbors, living closely to each other.
(Farmer 5)

- Procuring system of 'collector takes all'

The procuring system of 'collector takes all' applies in all farmer-collector dyads. Because of this system, there is no need for a collector to specify their demand in terms of quantity, quality and variety of banana before procurement.

- Farmers are not bound to deliver banana on schedule

According to farmers, the reason why coordination is not necessary is because they are not bound to deliver bananas to the collector on a fixed schedule. In other words, they can deliver bananas whenever they are ready.

Whenever I have the time to deliver to the collector's place, I deliver whatever I have without coordination with buyer first.
(Farmer 3)

- Adversarial relationships

Farmers and collectors can transact without having a regular relationship as farmers can bring their bananas to any collector along their way and collectors can drive through and around the village and buy bananas from any farmers they find as long as the price suits them.

As a small scale seller, this is how I do things: I bring my product, now there are many potential buyers, if I don't gain any earnings maybe I will take back my product. As a banana seller, sometimes I buy from other farmers, sometime from my own farm. If I get banana but there's no earning in selling it to a buyer, I'll go to another buyer. (Farmer 2)

Sometimes when we are out and we see banana at a farmer's place, we ask if we can buy them. If the negotiation fails, the farmer might sell it to other collector. There are many collectors around. (Collector 2)

(iii) Forms of coordination

Despite the limited communication and coordination, some farmers admitted that they have a form of coordination with a collector in terms of communicating demand and supply as well as delivery or collection time.

- Demand and supply

In times when collectors are in need of banana, they will initiate demand but when there is no call from collectors while bananas are ready to be harvested, it is the farmer who announces that a supply is available.

He calls me first asking if I'm going to chop/harvest today, then I will go harvesting. If he doesn't tell me to harvest, I don't harvest. But when the banana is fully mature to be harvested, I call him to say that to him and he says OK, chop them off and I'll come. (Farmer 10)

- Delivery/collection time

Coordination is reflected in the way that farmers do not harvest their banana without any confirmation from collectors.

Before I chop down banana bunches (harvest), I call the customer first to confirm. After I finish chopping down I will call him to tell him how many cars the banana fit. So for example, if the harvest day is Thursday, I call him on Wednesday for the transportation on Friday. As such, it takes 2 days. Cannot do all in one day. (Farmer 12)

4.1.2.6 Supply chain governance

In this dyad, the farmers' dependency is influenced by two factors: the need for financial support and the characteristic of product.

- A need for financial support

There are farmers who rely on collectors for financial support. These farmers generally grow no more than 500 banana trees; banana crops annually whereas wood, palm or cocoa trees can be harvested in 2 to 5 years. Meanwhile, the revenue from banana is not enough to cover their family needs. Therefore these farmers rely on collectors for financial support not just for daily needs, but also for unexpected needs. Their dependency on the collector restrains them from bringing their banana directly to the wholesale market although they have access to it and they know they can gain better price by using a shorter supply chain.

But here things are not like that. Still we have to appreciate each other. So, because I am used to sell my bananas to the collector here, I cannot just stop doing it and bring my bananas straight to the market. I don't want to be like that because later when I need money, he won't lend me any. Many people here need money. I am afraid that when I need money and go to him to borrow, he won't give me.
(Farmer 5)

- Characteristics of product (an operational issue)

Bananas being a high perishable product, the farmers' dependency is reflected in the way farmers take the price being offered.

I take the price collector give because it's still better than letting the bananas sit just like that.
(Farmer 10)

On the other hand, a collector's dependency is influenced by the need of supply as many as possible from farmers and the competition at collector level.

- Need of supply from many farmers due to small scale of farmers

Collectors who buy from farmers with a very small scale of production rely heavily on them for bananas; so collectors do not reject them even when farmers bring them bananas at the wrong time, when collectors are temporarily closed for business fearing that farmers will take offense for rejecting.

I have oversupply only following the Eid day (Moslem celebrate end of fasting month) because we have a few days off where we don't buy/receive bananas. So when the holiday is over, farmers bring me abundant bananas and I still accept them. If I don't accept them, those farmers will not bring me their bananas anymore. So I have to accept all bananas they bring me.
(Collector 1)

- Collector competition

The collector's dependency on farmers is influenced by the competitiveness of supply among collectors in the area. This competitiveness is high because the distance between one collector and the other is very close. The high level of competition makes collectors develop strategies to secure supply; these strategies include lending money to farmers.

There are many collectors here, there are 3 collectors nearby and more collectors further up. (Collector 1)

In here, if we don't do it (lending money), the business won't run. (Collector 1)

They are the ones who sometimes ask me if I need any money; they can pay in advance for my bananas. What I mean by pay in advance is this: I have needs but I haven't chopped the bunches [harvested them]. I can ask for money from them which I will pay with banana. (Farmer 8)

Power versus dependency in the dyad

Although the farmer/collector dependency is influenced by various factors, interestingly, participants have their subjective perspectives of power in the dyad. Three out of eleven farmers believe that the collector is more dominant because:

- * the collector initiates price although the farmer can actually negotiate/bargain,
- * the collector has the resources to lend them money, and
- * the collector has the resources to reward farmers who do the 'finding banana' task for him

Similarly, the collector believes that he is more dominant in the dyad because he is the one who initiates the price.

Nevertheless, two out of eleven farmers believe that they have a better bargaining position in the dyad because:

- * they are free to choose any collector since they do not borrow any money from any collector,
- * they think that they are well informed of the market price and are in position to negotiate price.

The remaining farmers believe that both parties have an equal bargaining position.

There are several factors relating to power and dependency in this dyad. These include:

- Size of farming

Farmers with very small scale banana farms who grow banana as a side crop are not worried much about finding a collector. They can take bananas by motorcycle and sell them to any collector they can find or like. Meanwhile, for farmers with larger scale operations, whose income depends on banana, they are at risk of loss due to having to hold bananas if they cannot achieve a deal with a collector.

- Alternative partner

The number of farmers exceeds that of collectors in every location. Even so, farmers do not compete for banana customers when their banana farm is very small. However, a collector's business scale is much bigger, and to keep the flow of product to their customers, collectors need as many bananas as they can get. As such, in the village, bananas are always in great demand, and the power resides in the farmer.

- Distance to collector

For the farmer with a very small scale, taking their banana to a collector in a faraway location means higher transportation costs which can lead to less profit. Thus, it is better for them if bananas are collected by the collector. When customers for such farmers are nearby, they do not have to depend on a collector for collection. On the other hand, it is also not feasible for farmers with larger farms to bring bananas to any collector because they do not have a pick-up truck. Thus, they rely on the collector to come and collect the banana.

- Demand fluctuation

This applies to farmers who rely on banana as their only source of income. Farmers in this category normally produce more than 500 trees. When banana is in great demand, collectors without a regular farmer will have difficulty in finding banana but when demand is low, a farmer without a regular collector will suffer an extremely low price or have no collector at all. The interdependency is shown in the way regular farmers and their collector agree on price. When the market price is high, the collector agrees to pay accordingly and, when the market price is down during low season, the farmer agrees to sell at lower price.

Generally buyers like to play on farmers. When banana is 'ho'' they after us but when price goes down, they don't want to buy our bananas. My preferred buyer is easy, I chop/harvest banana and report to them, that's just it. When the price goes down, of course they pay me a little less. But as for the runaway collectors, when the price goes down, they give me many reasons to reject my bananas.
(Farmer 8)

- Characteristic of product

The absence of a storage cold room to prolong the life cycle of banana makes farmers need to sell their bananas quickly and for collectors to maximize delivery capacity quickly. For farmers, their bargaining position is determined by the quality of banana they have.

If my banana is bad/poor, I am submissive to his price determination. But if my banana is of good quality, I bargain with him. (Farmer 3)

- Collector's lack of labour

Collectors do not have employees to search and collect banana from around the village since they normally operate on their own. This makes them often rely on farmers to search for bananas. Collectors inform farmers that they need more bananas and farmers might go to buy bananas from other farmers and bring them to the collector at an agreed price. This opportunity provides farmers with extra income.

He is the one who makes the order, not me, so he is the asking for banana. For example Mukri tells me 'Kang, find me some hundreds of banana hands or some hundreds of banana bunches, then I will go search for them and gather them at my house, after that I go and call him (buyer). When I look for bananas, if I sell to Mukri at Rp. 3,000, I wouldn't go and look for banana of Rp. 3,000 in price. Instead I will go for bananas with the price of Rp. 2,500 or Rp. 2,000. (Farmer 5)

- Money lending

Farmers who borrow money from collectors are bound to keep the level of satisfaction and trust of the collector by bringing their bananas to that collector or act on the collector's behalf to find bananas. Meanwhile, farmers who do not rely on collectors for financial support do not feel obliged to fulfill the collector's request.

I have never been asked for more bananas than I have. I sell what I have in hand. If I have 50, I sell 50; if I have more, I sell more. I have no problem or pressure with demand fluctuation because I don't borrow money from anyone. So if it's available, it is taken but if it's not available, it's not taken. As such, I don't depend on anyone. If I owe the collector money, I have to bring him/her bananas every two day. (Farmer 2)

4.1.3 Uncertain environment

4.1.3.1 Agility driver

Six items were used to identify agility drivers (hygiene and food safety, traceability, fair trade, sustainability, customer preferences, and adaptation). Although all members of the farmer–collector dyad mentioned that there have been no changes in any of those areas in the past three years, they were asked to express what these factors mean to them and how they apply them.

(i) Hygiene and food safety

Dyad members associate hygiene and food safety with keeping the warehouse (for the collector) and field (for the farmer) neat. For the collector, this is done by sweeping the warehouse floor when it becomes dirty, while for the farmer it is not an issue at all, because the dead banana trees can be used as organic fertilizer.

(ii) Traceability

Traceability is not applicable in this dyad because it is not important to the dyad members. None of the dyad members keeps any record of or has knowledge about other members in the supply chain network beside their immediate dyad partner.

(iii) Fair trade

Dyad members have various perspectives on the concept of fair trade; they relate it to:

- Mutual gain:

Fair trade means I gain a profit, he/she also profits as he/she sells those bananas again.
(Farmer 2)

- Proportional reward

To me, fair trade is when I get a higher profit compare to what my buyer gets because in terms of sacrifice (effort), I sacrifice more than he does.
(Farmer 6)

- Mutual trust

Fair trade is when I trust my buyer and he trusts me back, that is fair enough to me.
(Farmer 8)

- Receiving support through money lending

To say fair trade doesn't exist, it is there. To say there fair trade exists, it's not there because it is business. Borrowing/lending money is fair. If we want to

borrow money but kept being rejected, it means that person is stingy, that is not fair. (Farmer 5)

- Fair price

Farmers' views on fair price tend to differ from one to another. For instance, some farmers may judge fairness based on the amount of money received while other farmers have an attitude based on the degree of mutual trust he and his buyer have. The trust is based on honesty; in other words, as long as the other party is honest and does not lie, that is fair trade.

Trust means honesty. It is when my calculation of bunches meets theirs. Sometimes I say there's no need to count but they do count. That means that person is kind because his counting might be higher than mine. (Farmer 8)

(iv) Sustainability

Sustainability and the concept of being environmentally friendly has a different meaning to the farmer and the collector. For instance, two farmers associate it with land preservation, another farmer relates it to keeping a property and another related it being social friendly as he interpreted environment to be about people rather than nature. However, most farmers do practice sustainable farming in terms of low input of harmful fertilizers and pesticides. A few farmers indicated they did not use fertilizer at all due to financial reasons.

(v) Customer preferences

In general, farmers have understood what their customers value. Out of 13 elements (product safety, convenience, fair trade, consistent product quality, competitive price, high quality, range of products, reliable delivery, packaging, speed of response, flexibility in responding, promotion and customer service), only four factors are not applicable; namely, fair trade, packaging, promotion and customer service. Although farmers admitted that they know what their customers like, all farmers said that they do not change their system to meet the needs of their preferred customers. In other words, the farmers' production is not influenced by their customers; as such, customer focus is lacking.

(vi) Adaptation

All dyad members admitted that they do not make any changes in the way they carry on their farming or business activities according to the request of their partners.

4.1.3.2 Competition

(i) Attitude towards competition

Competition in this context refers to the competitors at the same level, between a farmer and another farmer or collector against collector. Although there is no competition at the farmer level, they are aware of the industry's competitiveness. The majority of farmers assessed industry competitiveness as medium. Generally, farmers do not have competitive pressures, even from farmers who trade with the same collector.

I don't feel I have competitor. (Farmer 2)

We don't have competition here because we have become one. One means we are under the same boss (collector). It has been like that from long time ago, no envy. (Farmer 8)

Three out of eleven farmers rated their competitive pressure as low, while the remaining farmers said they do not have any competitive pressure at all. However, it is important to notice that farmers who expressed competitive pressure do not refer it in terms of banana competition alone or in terms of sales and quality; rather, they consider competition to include other seasonal fruits such as rambutan and durian.

Competition is there but it's not like a contest/race. There are some who grow more banana trees, some whose bananas are of high quality. It depends on the location where they grow them and the soil. All soils are not the same, some are good and some are poor. (Farmer 5)

Farmers who also grow banana, rambutan and coconut. (Farmer 6)

There are other banana farmers and seasonal fruit farmers. Most consumers have grown to prefer other fruits such as rambutan and langsat (seasonal fruits) and that sometimes makes my banana sales drop. (Farmer 7)

(ii) Hedges to competition

Competition is not significant to farmers. This is caused by factors such as:

- Familiarity

Farmers who live in same village are normally family-related or close friends that are not seen as competitors.

We don't know. Here we are all relatives/family, so there's no competition. But the one with the biggest harvest is my mother/father. (Farmer 10)

- Importance of banana to farmer

Many farmers have turned to annual crops for the main source of their income. This leads to a decreased number of farmers.

There are many people here grow Albasia instead of banana, therefore no competition for banana.
(Farmer 5)

- High demand of banana

When the demand for banana is high, farmers would like to expand their farms should they have the opportunity.

There is no competition in this village. It's all up to everyone; whoever grows more banana, receives more income. There is plenty of land but the hard part is, this is not my own land.
(Farmer 12)

Moreover, farmers who often work for collectors in searching for banana think that it is beneficial for them if more people grow banana, preferably in a small quantity or just as side crops. This provides the farmers with more opportunity to make money out of banana because their production alone may not enough.

I buy bananas from other farmers (neighbours) because my harvest alone is not enough. I ask my neighbours his/her price. If the price suits me, I can go to the village and harvest his/her bananas myself. I buy banana at Rp. 2,000 then I sell it at Rp. 2,400 then my buyer sell them at Rp. 3,000. That is fine, it is fortune sharing.
(Farmer 2)

- Trust

On the other hand, collectors feel the pressure of competition with the increased number of collectors and this pressure is intensifying as they believe competition is becoming more difficult due to an increasing number of collectors in a village. The collectors' competitive ability is influenced by their willingness to trust their farmers, by voluntarily lending farmers money and their ability to attract committed farmers. As the dyad relationship becomes closer, trust serves as a tool for the collector to build competitive advantage. A collector can extend trust by voluntarily and proactively lending money to farmers in order to gain the farmer's commitment and gain the farmer's favour in the forthcoming harvest due to the increasing pressure of competition.

He is attentive towards me. I know businessmen prepare for the future. Conditions change all the time. This year my harvest might be abundant with good quality and bananas big in size. He also tends to be promising. Sometimes if I haven't been to his place for 3 weeks he calls me to come and

says: "Friend, I have money of this much (Rp. 300,000 or Rp. 500,000), you can take it for next harvest". Then I say: "But my trees haven't shown any sign of harvest time yet." He would reply: "Don't worry, take the money first, I fully trust you. I realize that it's a way of the collector to gain regular supply, it's like creating bond. I understand business. Although I cannot tell how much to be exact, I understand that when he (customer) is back from the market, he brings with him big profit about 50%. So I think, this customer with big profit, instead of him keeping his money inside his pocket, it will bring greater benefit for him to provide debt to growers. (Farmer 4)

4.1.3.3 Reporting on capability to compete

Whereas competition does not affect farmers, on the other hand collectors are trying to be competitive and realise there is an increased number of collectors. The capability of collectors to compete depends on the number of farmers they have, the performance of farmers, and the commitment of their farmers.

I respond to it indifferently, I don't think about it that much. It depends on my supplier's performance. When we have many suppliers, we are safe. There are a few of my supplier who bring their bananas to other collector who offer higher price but it's very few, only 2% doing it. (Collector 1)

4.1.3.4 Dynamic capability

The dyad's dynamic capability is measured based on its members' perspective of supply chain complexity and their innovating capability

(i) Complexity of activities

One farmer mentioned that of all farming activities, mending banana trees is the toughest one although the process is simple. All the remaining farmers and collectors admitted that their supply chain activities are simple. This shows that, in general, supply chain activities are seen to be quite simple. The simplicity of processes is influenced substantially by the simple methods and equipment used. For instance, farmers do not have to buy seed since they can use their own seed, and fertilizing is minimal; the planting method is simple as farmers do not have to follow particular procedures. Harvesting is simple because there is no post-harvest treatment, and transportation is easy because there is no packaging and cold storage required in the supply chain. The farmer who mentioned that mending banana trees is tough might have based it on the fact that, as most banana farmers do, he works by himself to look after the banana field.

(ii) Innovating capability

Farmers have different perspectives on innovating capability. Some farmers believe that their innovating capability is low while other farmers consider it quite high. The difference appears to be in relation to the size of field. Farmers owning less than 500 trees of banana tended to be less confident in their ability to innovate compared to those with more. However, farmers are generally low in income which means that they cannot afford innovation costs themselves. Also, innovation entails risks. Due to the farmers' low capital base, they are unable to bear the risks of innovation; they prefer to associate within the farmers' group. In other words, they are willing to innovate with their farming methods as long as there is a guarantee from the farmers' group regarding the success of new methods and payments.

If there's any opportunity, I would like to take as long as it suits me; it would have be better if there's new pesticides or methods. I would like to try them. Normally new things like that are from the farmers' group. We can do it if we can pay for it in instalments when we have good result. As farmers, we are poor, so that's the way things are.
(Farmer 12)

The above expression indicates farmers' group has a role in introducing a new variety or method to farmers. However, the group is unable to neither assist farmers in accessing the method nor guarantee the success of the new method.

4.1.3.5 Supply Chain Uncertainties

(i) Sources of uncertainty

Bananas produced by farmers and bought by collectors constantly vary in terms of variety, quality and quantity of banana produced. Variation of banana traded is much influenced by the farmer's decision. Generally, factors that influence the farmers' decision are:

- Variation in harvest quantity

Farmer's production varies from time to time. Generally, farmers harvest every two weeks but the amount of banana they harvest can fluctuate widely.

I harvest every 2 weeks and production goes up and down. For instance, last harvest was 470 hands, before it was 520. In another page, start from here, its 240 hands, then 270 hands, then goes down to 250, goes up to 290, 250, 280, 240, 290, 400, then 464 hands. It always goes up and down every two weeks.
(Farmer 9)

Sometimes I harvest many but sometimes a few. Quantity varies from time to time because as trees go old, they produce less. But then the saplings all produce fruit, the quantity increase again. (Farmer 10)

Yes, harvest sometimes plenty, sometime less because sometimes the trees are worn-out while their saplings have not bear fruits. In contrast to new trees, once banana bunches are chopped down, their saplings soon bear fruits. (Farmer 12)

- Resistance of banana trees against disease

Plant diseases such as fusarium and blood disease bacterium have a great impact on production because the diseases can hit undetected and there is no solution to overcome the diseases. The symptoms often cannot be detected until banana trees are fully grown or the bananas are ready to harvest. Once the banana trees are infected, farmers just chop down the infected trees and other trees around it considering that they are also infected since the spread of the virus and bacterium is fast.

When I planted the seeds in my field, they were soon infected by the disease. So in regard to banana disease, nothing works so far. (Farmer 12)

Rutai banana is quite expensive but it's not durable like Mauli banana. I only grow these three because they are the only variety resistant to disease. Kepok and Ambon are not resistant to disease. Disease causes Kepok becomes yellow, there is no fruit flesh in it, just black. (Farmer 8)

I don't grow Kepok because it has many diseases (= not resistant to virus). (Farmer 12)

- Farmers' capability

I grow what I can; the buyer never tells us what to grow. (Farmer 10)

- Growth rate of certain variety

Mauli banana dominates the harvest because it bears fruit faster. (Farmer 12)

- Trading rule and mechanism

The unwritten rule that a collector must buy the whole lot means that the collector receives different sizes and quality of banana each time. There is no certainty that the next lot will be the same as, or even like, the previous one. Collectors generally trade more than three varieties of banana. There is no restriction on quality that farmers have to meet because the term of transaction is that collectors have to take all of the bananas that farmers bring regardless of the different quality. Consequently, there are inherent product uncertainties for collectors.

Farmers bring mixed bananas. There is one or two brings only White Ambon but many bring mixed of Tanduk Banana, Lilin Banana and White Ambon.
(Collector 1)

The trading mechanism in regard to flexible payment may also lead to price uncertainty. Payment methods of instalments and by invoice can cause price uncertainty which lead to income uncertainty for farmers. Postponing of payments allows a collector to alter the agreed price on the basis of the sudden change in wholesale price.

The thing is, there are quite a number of collectors who pick the bananas up to the city and while they are there the price drops which result in me receiving less money than what was agreed on before they leave for the city. That is the problem; the final price paid to me is different to the agreed price. Many traders do that.
(Farmer 12)

- External factor: Weather

Weather plays an important role in causing inconsistency in a harvest. It impacts on the yield and quality of banana produced.

During dry season the fruit is small. (Farmer 2)

Dry season causes 'paceklik' (= shortage of banana). Not only I harvested a little, you can say I harvested nothing because trees are dead. (Farmer 2)

If it is the season of strong wind, the trees collapse. That reduces yield. Dry season also creates significant yield decrease (Farmer 3)

(ii) Coping with uncertainty

In coping with uncertainties, dyad members have developed unwritten rules related to:

- Flat price

Both farmers and collectors examine the lot of bananas and negotiate a flat price. The price applies to every hand in a bunch; the mixed quality of banana makes it tiresome if collectors have to grade all the bananas. Therefore, despite differences in the size of bananas, each hand in a bunch is paid equally. In other words, one price is for all.

When he comes he takes all, no left over. That is because he is my regular buyer. All hands in a bunch gets same price irrespective of the size. (Farmer 10)

The price is negotiated according to the mixed size of bananas in the lot. If the big hands outnumber the small ones, the average price is in according to big bananas, but when small hands dominate the lot, then farmers are paid the market price. Market price is understood as the general farm gate price.

I am not picky with farmers, I accept all bananas. But the price for each farmer maybe different. The price for farmers with big bananas is different to those with smaller bananas. So the difference is in the price. (Collector 1)

If the bananas are slightly smaller and none of them is big, then the price is reduced (down to Rp. 2,500). But if the lot has some big ones, for instance a mix between 50 small hands and 50 big hands, the price is the same for all, Rp. 3,000 (according to the price of big hands). If the mix has more of smaller bananas, the price slightly decreases. When the big hands are less in number, their price is set according to the small hands. (Farmer 5)

- Discounted price

Due to the trading rule that a collector must take all, it means a collector must also take the inferior or very low quality bananas included in the lot that a farmer brings. Taking these inferior bananas at a flat price will certainly incur losses for the collector. Thus, the inferior bananas are generally valued at half price. In other words, two inferior bananas are for the price of one good banana. This system benefits farmers because without the ability to process banana, it is better for farmers to sell their inferior bananas at a low price than having them left as waste. Thus, from the farmer's point of view, it is an advantage. For instance, the market prefers mature to immature bananas; mature ones are better in taste and good for cooking as well. Immature ones are of low value in the market, although technically, mature bananas have a shorter shelf-life compared to immature ones. But farmers actually are better off when collectors are willing to accept immature bananas.

Good banana hands are counted 1 (as it is) while immature ones are counted 2 for 1. That is the flexibility and compromise between my preferred buyer and me. (Farmer 2)

4.1.3.6 Future challenges

Between farmers and collectors, only collectors clearly expressed the view that the main challenge they have in the future is increased competition. On the other hand, farmers do not have any prediction of future challenges. Instead they expressed the major challenge they are facing now, for which it seems there is no solution just yet; this challenge is combatting the issues of banana disease and the weed problem. These two issues increase the farmers' input costs and waste costs as farmers have to chop down the banana trees.

The biggest challenge is the impact of disease. It attack Kepok and Ambon bananas, Raja banana. Mauli banana seems to be attack and there is no cure. The only way we deal with it, we chop down the tree. (Farmer 11)

The biggest challenge is the disease that required continuous weed spray. It is difficult to gain money to buy herbicide because it's expensive. (Farmer 12)

4.1.4 Relational factors

4.1.4.1 Satisfaction

(i) Defining satisfaction

Participants have various perspectives on satisfaction; perspectives that might be similar to, or different from, one another.

- Satisfaction is profit

For both farmers and collectors, satisfaction is related to revenue they make from the banana transaction.

Coming home after selling banana, if I make profit wow there is satisfaction, but if I make a loss, I can only frown/sullen. But it's not always like that. (Farmer 5)

In terms of profit it is not bad. I feel satisfied based on the result/profit. (Collector 1)

We transact to sustain our business. I am satisfied when all parties involved get along well. As such both can gain profit out of the products. (Farmer 4)

- The ability to support family on daily basis

Beside profit, satisfaction can have various other meanings for farmers. They associate satisfaction with being able to provide continuously for the daily needs of their family, which is already a satisfaction by itself.

When all my family needs are covered, that is my satisfaction. What I mean by needs is for example now I plant 500 trees and later can harvest them all so I pay for my children's education, buy clothes. And that is why sometimes I ask for favour from buyers when the needs come but it is not harvest time. (Farmer 8)

- Steady income through continuous sales

Generally, farmers harvest a banana crop every two weeks and they hope that every time they harvest, they can find a collector who will give them a reasonable price as soon as possible before the bananas go off.

I'm satisfied when I can keep selling to my nephew as long as the price matches.
(Farmer 11)

- Fair price

Satisfaction is related to the use of a fair price in the transaction. Since there is no standard price, fair price is associated with the market price.

I am satisfied when buyers don't play the price; that is when the market price increase, he pays me higher. For example, during Ramadhan (fasting) month, banana price goes up, buyer pays me accordingly. (Farmer 7)

- Continuous supply

Collectors tend to associate satisfaction with continuity of supply. Despite the unpredictable production disruption and mixed quality of bananas received, the availability and continuity of supply greatly influence a collector's satisfaction.

Income satisfaction from banana depends on availability of supply that goes up and down. Like these days, it has been a difficult period, supply is down and so is revenue. We had dry season and when it passed and bananas were looking good, strong wind came and brought down the banana trees.
(Collector 1)

(ii) Factors influencing satisfaction

In this dyad, satisfaction is influenced by several factors:

- Payment method

For farmers, satisfaction is greatly influenced by the method of payment. Generally, farmers prefer full payment from their customer.

I am satisfied when he pays me in full, usually after he receives payment from his customer. (Farmer 5)

- Additional benefits

The farmer's satisfaction with the relationships is influenced also by non-financial benefits they gain. These include cheap access to agricultural inputs, free ride to the city and various goods from the city. The price of agricultural inputs is higher in the villages than in the city.

Farmers can ask their collector who either lives there or visits regularly to buy them pesticides or fertilizer from the city which they pay for later by deducting it from the total value of their bananas. As such, farmers are able to reduce their production cost.

And he also helps to buy pesticide for me in Samarinda (the city) that I will pay him when he comes to buy bananas. The price of pesticide here is a little more expensive than in Samarinda. (Farmer 10)

Well, there are things that improve my satisfaction over my buyer. Sometimes my buyer helps me in matters outside business. My buyer has a few vehicles that sometimes I can ask for help like free ride when he happens to go on the same direction and he often lets me borrow his car. (Farmer 6)

(iii) Maintaining a partner's satisfaction

Realizing the importance of maintaining a partner's satisfaction over transactions, both parties try to maintain their partner's satisfaction through:

- Committed actions

Commitment in buying and selling means a sharing of benefits in good times and losses in bad times. There are certain periods where banana demand goes down, seasonal fruits are in season and the fasting month comes to an end. During such times, having faithful customers allows farmers to continue to make money out of their harvests.

Likewise, there are times when the banana price goes up and collectors who don't have regular farmers will have to pay a premium price for bananas; otherwise they will have no supply at all. Therefore, maintaining a committed relationship with farmers allows collectors to have a regular supply at reasonable price.

- Money lending

Whenever farmers need money while their bananas are not ready for harvest, they often go to collectors to take a loan; the loan is paid back with the forthcoming harvest. The ability of collectors to lend farmers money directly influences the farmers' satisfaction. On the other side, this practice benefits the collector as it serves as a guarantee that the collector will be the one who has the farmer's next harvest. In other words, collectors are able to secure their supply through lending money to farmers.

All my needs covered, that is my satisfaction. What I mean by needs is for example now I plant 500 trees and later can harvest them all so I pay for my

children's education, buy clothes. And that is why sometimes I ask for favor from buyers when the needs come but it is not harvest time. (Farmer 8)

What sometimes disappoints me is when I need money and my banana is still unripe, my buyer can't lend me money. In such a situation I can only say in my heart 'how could he doesn't pity me?' But it doesn't make me borrow money from another collector. (Farmer 3)

- Understanding partner's need

The ability to understand a partner's specific condition enables the dyad member to know and provide what their partner needs. This is demonstrated in the collectors' ability to understand the farmer's conditions. Collectors understand a farmer's financial situation and that it leads them to lend money to the farmer.

- Price transparency

It has been common knowledge in the industry that collectors, in order to gain a greater margin, may not tell farmers the actual market price. However, in some dyads, farmers and collectors have developed open and honest relationships whereby collectors often take farmers to the market to prove that collectors are not lying about the price. Therefore collectors who are able to provide farmers with proof of price transparency will gain the respect of farmers.

Sometimes my buyer also says that if I don't trust him, I can come with him to the market to prove to myself that the price is going down. So when I come to him to the market I see that my buyer is right. This makes me satisfied. (Farmer 4)

(iv) Dealing with dissatisfaction

Both parties encounter dissatisfaction from time to time. Farmers can be dissatisfied when collectors pay them less than they expect or cannot lend them money and collectors are unhappy when farmers fail to bring them banana as promised. However, both parties always try to stay calm and patiently accept the situation.

As human, we are not perfect. Since the partner's shortcoming is only a little, it is then acceptable. Occasionally, my buyer forgets to pay me but it's very rare, only 10%. (Farmer 4)

I just keep silent, not making any comment. (Farmer 1)

I can only be patient. Maybe he hasn't got money from his delivery. Well, we just try to understand each other's situation.
(Farmer 5)

I am a quite patient person. I let them be like that if my supplier sells to other collectors who pay them higher than me.
(Collector 1)

The role of patience in maintaining B2B relationships is important in this dyad. Dyad members need to have the ability to be patient in dealing with dissatisfaction or shortcomings of their partner. The ability of a dyad member to be patient is influenced by:

- The need to maintain the B2B relationship

For collectors, being patient is shown in the way they stay calm and do not express their anger. Maintaining the farmers' satisfaction is important because if farmers are unsatisfied they can easily take their bananas to other collectors since there is no written or legal contract between farmer and collector.

Sometimes there are buyers who are fussy, saying this that bla bla. If customer is so fussy/talkative I just leave him/her.
(Farmer 2)

What is important is he is good. If he becomes fussy, I might find another regular collector.
(Farmer 10)

They will say to each other 'don't go to that collector, she fussy that if we owe her money, she is often got upset with you'. That is why although there are farmers who are like that (= fail to settle their debts), I just let it go.
(Collector 1)

- Religious beliefs

Patience towards a partner's shortcomings in the relationship is underpinned by the strong religious belief that a person's fortune is determined by God. This belief has two elements. First, if someone misses his opportunity, it is not because he has failed; rather, it is a result of God's will. Secondly, if someone endures losses caused by a partner's wrong doing, God will reward him in another way for his patience.

So they take advantage over me. I feel like I want to express my emotion but I don't do it. I can only be patient because I believe I have received another fortune in return. It depends on God to arrange the best for each. If my fortune is still there, it's there. Because it not good if we often expressed our disappointments.
(Collector 1)

- Timely settlement

On the other hand, the farmers' patience over a collector's shortcomings is shown in the way they wait for the right time to settle the conflict. They do not rebuke the collector straight away; rather, they save the collector's face by rising and settle the issue during the next transaction or informal meeting.

When my expectation is Rp. 3,000 but I am paid Rp. 2,000, I will let the buyer have it although he pays me Rp. 2,000 because that is my character. Later when I see him again, I will tell him. To say it not a loss, it is a loss. To say it a loss, it's not really a loss. So when I see him again I will tell him 'Last time you paid me Rp. 2,000 but now Rp. 3,000. By doing that, I was testing him to see if he could balance the price. I know the value, I know the price. If he, for example sell at the price of Rp. 3,500 and buy from me Rp. 3,000, that is maximum or suitable but if his customer pays him Rp. 3,500 and he pay me Rp. 2,500 that is too much on his side. That is why I let him pay me less today because next time will be my turn. When it is my turn, he will obey because he realizes that last time he didn't pay me with the current price, he will think that last time he pays me too cheap. (Farmer 5)

4.1.4.2 Trust

(i) Defining trust

Dyad members associate trust with:

- Partner's loyalty

A farmer's trust towards their collector is influenced by the collector's ability to keep up transactions by continuously buying from the farmer despite the uncertainty of demand or when demand in the market is slightly low.

When the buyer faithfully buys from me without decreasing his demand, that is trust to me. (Farmer 6)

- Shared perspective of the quality of banana

The size of banana hands in a big batch varies as there are big and small hands of bananas in a bunch. One big hand of banana is considered as one hand whereas two small hands of banana are regarded as one hand. Therefore the actual number of hands in a batch does not reflect the final calculation. Both parties need to be agreed on the assessment of size. Since the quantity of banana differs in every transaction, collectors may need to recount the number of hands in a lot as they load the bananas unto the pick-up car and then match it up with farmers' version. The closer their versions, the more farmers trust the collectors, as farmers associate honest counting with honesty.

Trust means honesty. It is when my calculation of bunches meets theirs.
(Farmer 8)

Trust is when the count/calculation is exact or precise, not less or over.
(Farmer 10)

(ii) Forms of trust

Trust shows in the forms of:

- Lending money

Trust between members of a dyad is shown in the way members lend money to each other. Generally, it is the collectors who lend money to farmers.

I don't lend money to those I don't know well or who are not trustworthy, who I'm afraid are not honest. So we have to know them, know where he lives.
(Collector 1)

- Commitment

Due to simple traditional farming, the quality of a farmer's production varies from time to time. The collector's commitment to buy the farmer's banana despite the quality variation shows collector's commitment which, in turn, increases the farmer's level of trust in the collector. On the other side, farmers believe that their commitment to the relationship is shown by not switching to other collectors, and that is what make a collector trust them.

Trust is when they keep buying banana from me regularly although maybe sometimes the quality is low.
(Farmer 7)

(iii) Development of trust

Although the relationship between farmers and collectors starts with trust, over time the level of trust can decrease. Therefore, it is important for both parties to increase the level of trust between them; several factors influence the level of trust in the dyads:

- Partner's committed actions

Trust over a partner is triggered by the partner's commitment. This commitment shows in the way the partner decides not to switch to others given the opportunity.

Me and buyers have been regulars for a long time. I never switch to other people during that time which make him trust me.
(Farmer 8)

- Honesty in pricing

Price has become the foremost indicator by which a farmer judges their collector's trustworthiness. In the business transaction, it is the collector who initiates price and farmers can negotiate if they think the price should be higher. The initial price that a collector offers is used by farmers to determine whether the collector can be trusted or not. Farmers can obtain price information either from the nearest market or other farmers and use it as their basis to judge the price offered by the collector.

I started to trust my regular buyer because in the past he bought banana from me in cash and with decent price. What I mean by decent price means he doesn't lie about the price. There are buyers who tell farmers that the price is this much while the truth is the price is higher than that. (Farmer 7)

She gives me good price. That's the only reason. (Farmer 1)

- Keeping promises

Keeping promises impacts on the growth of trust. Distrust by collectors often relates to the money borrowing issue, while for farmers the major areas of distrust are those of price and banana collection. Farmers often borrow money from their collector with the promise to pay it back with banana when the harvest is due. However due to the lack of legal contract farmers may not keep their promises and take their bananas to other collectors who offer a higher price. Similarly, the lack of legal contract regarding price or time of banana collection may cause farmers to receive a different price.

With farmers, sometimes I already trust them, but they turn to others who pay a slightly higher price. If for example my price is Rp. 5,000 and there is other collector pays Rp.5,500 or Rp.5,200, those farmers bring their bananas to that collector instead of me. That is not loyal. It makes my trust over them decrease. (Collector 1)

- The growth of sense of togetherness

Trust also develops out of the sense of togetherness because both parties see mutual benefit out of the relationship and have understood each other's character.

The point is we have to be together. What I mean by togetherness is I gain fortune from banana, he also gains fortune from banana. (Farmer 2)

We are getting closer to each other so that means the trust increases. This is because we know each other's character. (Farmer 3)

- Truthfulness/trustworthiness/honesty

A farmer's judgment of banana size can be different as it is influenced by subjective assessment. When there are two versions in relation to banana size, normally the collector's version is used. Sometimes farmers forego the little hands of banana in bunches but collectors include them in their counting; the result is a different version of quantity with the collector's higher than the farmer's. In such a situation, the collector's version will be used. Therefore, to avoid counting differences, collectors usually trust the farmer's version. The collector's trust of the farmer results in the latter being pleased at being trusted by the collector.

But he feels that there are more hands than I have counted, he counts back. Most of the time, when the buyers' version is better than mine, it is awkward then for him to use my version which is less. Therefore they just use my version. In other words, they trust my calculation without counting back. (Farmer 8)

- Intuition

In some cases where farmers are to deal with collectors they are not familiar with, they use their personal feeling or intuition based on a collector's facial expression or words.

There are many alternative buyers and I usually choose by buyer based on face observation during transaction/meeting. People with kind and genuine heart show the aura of kindness on their faces. (Farmer 6)

- Promises and reliability

The ability of persons in the relationship to keep their promises is related also to the topic of reliability. Most farmers consider that their partner's reliability is high. Nevertheless, there are some farmers who mentioned that the reliability of their partners is low because their partners often did not keep their promises. Promises are made in regard to transaction, price and providing financial support.

What makes me distrust my partner is when sometimes he doesn't keep his promise. He promises to buy my bananas at a certain price but at the end of the day, the price he gives me is not the price he promises me earlier. (Farmer 6)

He promises to buy my bananas but he doesn't keep his promise. It often makes me upset to wait and wait for him to come. It takes him too long to come that my bananas start to deteriorate. (Farmer 7)

Yeah, it often happens. For instance, he promises to lend me money on Monday, but when Monday comes, he happens not to be making any money; I cannot push him to lend me money.
(Farmer 5)

4.1.4.3 Commitment

In farmer-collector dyads, relationship commitment reflects in the members' decision to keep the relationship despite alternatives being available. The absence of a written contract enables members to freely switch partner when there are many alternative partners.

(i) Defining commitment

In this dyad commitment is associated with honesty and loyalty which should reflect in the way dyad members interact with each other and transact business.

In terms of relationship between grower and collector, honesty is the most important. Without honesty there will many conflicts. So 70-80% of relationship commitment is about being honest.
(Farmer 5)

Commitment, maybe it's similar to loyalty
(Collector 1)

(ii) Forms of commitment

According to the dyad members their commitment is reflected in their decisions to:

- Give their best for the relationship

I am serious with this relationship with him and so is he towards me.
(Farmer 10)

- Consider their partner's profit

Commitment is when my desire is the same to that of my buyer, which is mutual profit.
(Farmer 6)

- Maintain core competency to satisfy the customer

By relating relationship commitment to seriousness to maintain their high quality product, farmers are actually focusing on the customer by making them happy and satisfied with the quality of the banana.

Commitment is important. I never fail from banana farming because I always take good care of my trees.
(Farmer 8)

- Continuous transaction

What I want is my regular farmers always sell me their bananas. (Collector 2)

- Be customer-focused through flexibility towards customized requests.

Collectors may request a certain variety of banana from farmers at any given time. Farmers who are able to fulfil the requests believe that they are committed to the relationship. This shows that farmers take pride at, and confidence in, being a preferred supplier.

Being able to provide whatever partner needs. (Farmer 3)

- Lending partners money without a written loan contract

Lending money to partners is seen as an act of commitment. Normally it is the collectors who lend money to farmers rather than the other way around.

(iii) Development of commitment

Several factors increase members' commitment to the relationships. These include:

- Members perceive a partner's kindness

Members' tendency to be committed to their relationships is influenced by how kind they think their partners are to them. In other words, their level of commitment depends on their partners' level of commitment. As such it reflects passivity of commitment. Returning partners' kindness also reflects reciprocity in the dyads.

In terms of maintaining my commitment to this relationship, it depends, if he is kind, I will be kind, if he is not kind, I'm not either. (Farmer 3)

- A partner keeps a promise

Because they always keep their promise. So our relationship is good. (Farmer 8)

- Partner's trust

This comes in terms of lending money, honest hand counting and faithful supplying

Commitment comes from trust. (Farmer 8)

- Community shared-value

Although the farmer has choices of collectors to whom they can go, he sticks to one collector so as to abide with the shared value within the local community; switching a collector to gain more money is not considered an acceptable practice. Playing collectors against each other will make the farmer's social image poor.

Even if another collector offers a higher price, it doesn't matter. In here, the way we do business is that once we regularly sell to one collector, we don't go to other collectors because it will be complicated and it's not nice. Although our regular collector doesn't always have money to lend us, we stick with them. It has always been like that for ages. (Farmer 5)

- Partner's commitment

He has been good. When price goes down he still buys from me unlike non-regulars who won't buy when price is low. During fruit seasons (Rambutan, Durian, Langsat etc) non-regulars won't come but regulars still do. (Farmer 10)

4.1.4.4 Opportunism

Opportunistic behaviour refers to deliberate actions to take advantage of another party. Both farmers and collectors recognize that opportunistic behaviour often happens.

(i) Opportunism - the farmer's perspective

From the farmers' perspective, opportunistic behaviour occurs in various ways:

- Hand calculation

Farmers believe irregular collectors generally like to cheat in hand calculation since they have no intention to be in a relationship with the farmers.

Regarding irregular buyers, they take advantage in counting. (Farmer 11)

- Price intransparency

Farmers also stated that a collector often takes advantage in regard to instalment payments. Farmers often allow their customers to settle the payment in the next transaction. However, this practice can lead to a few problems on the farmer's side. As market prices change, collectors may pay farmers less than what had been agreed upon on the last transaction for the lot of that day.

The thing is, there are quite a number of collectors who pick the bananas up to the city and while they are there the price drops which result in me receiving

less money than was agreed on before they leave for the city. That is the problem; the final price paid to me is different to the agreed price. Many traders do that.
(Farmer 12)

- Adversarial transaction

In dyads where farmers have a larger production and are distanced from market, collectors can take advantage to make short-term profit when banana price goes down, or can deliberately avoid buying banana.

(ii) Opportunism - the collector's perspective.

As for collectors, opportunism arises from the practice of money lending. Growers often borrow money from the collector promising to settle it with banana when the next harvest is due. However, these growers often fail to settle their debt by selling their bananas to other customers.

They come to me saying that they wanted to start banana business and needed money. After I lent them, sometimes they didn't come back. There are opportunist farmers who borrow money from me but deliver their bananas to other collectors. About 50% of my supplier does this.
(Collector 1)

To reduce the impact of a farmer's opportunistic behaviour in regards to money lending, being more selective in the choice of giving a loan is the appropriate action.

I just have to be more careful in giving loan, I shouldn't be too easy or quick lending money to farmers; yes I also have to know the farmer well before lending any money. Those who lie to me are not far away partners; rather, it is those who live close to me.
(Collector 1)

Opportunism in the farmer-collector dyad contributes to relationship uncertainty. Much of this uncertainty is caused by the fact that there is no legal or written contract between farmers and collectors. They rely only on each other's verbal promise.

Although opportunistic actions clearly are evident in the dyad, surprisingly, when asked about whether their partners have taken advantage of them in some way, both farmers and collector said none. One possible reason for the contradiction is their belief that the decision-making is not under anyone's influence; in other words, they are free to make their own choice and they don't feel like they have to follow orders.

It seems no such thing as taking advantage over your partner here. If I don't have what is asked from me, I just say I don't have it.
(Farmer 5)

There is no such thing about traders taking advantage over farmers. It's all up to the farmers themselves. There is no such thing as being cheated on because if we don't sell to them, there will be no transaction. (Farmer 12)

(iii) Avoiding opportunism

With the possibility of unpredicted opportunism occurring, dyad members have a number of strategies that they use to minimize being tricked; e.g.:

- Checks of nearby wholesale markets

Some farmers who live not very far from a market place can easily check the market price by going to the market place.

I also frequently check the price in LeuwiLiang market which is close, which makes me know the price better. The current price now, here I sell banana to Mukri at Rp. 3,000 per hand, I know he sells to his customer at Rp. 3,500 or Rp. 4,000. (Farmer 5)

I like to do market survey so I know which variety is saleable and which one is not; therefore, I'm not easily fooled by my regulars. If the price they offer me is not too low that means fair price, I am OK with that. (Farmer 4)

Every now and then I check the price on the nearby market (Farmer 7)

- Observing transactions the collector does with other farmers.

For farmers who do not have access to a market place, they usually communicate with other farmers in the village regarding the farm-gate prices being paid. This allows farmers to negotiate price with collector.

Do observation first so we won't be cheated. (Farmer 8)

- Debt management

Making sure a collector settles the current payment before making a new procurement.

I have to be assertive. Sometimes I let buyers buy by invoice because they don't have money to pay me cash. I always go and collect the bill from buyers. As such, we have to be assertive; otherwise, buyers might buy by invoice again and again. I don't want the bill to pile up, there are risks of buyers forgetting their debt. So I have to always collect the bill of earlier transaction before letting them buy by invoice again. (Farmer 6)

- Develop mutual relationship with a collector

By having a strong mutual relationship, both farmers and collectors can enjoy long-term benefits and minimize the likelihood of opportunism.

4.1.5 Performance

4.1.5.1 Financial performance

Overall, dyad members rate their financial performance as medium. However there are other farmers who think their performance is high. This difference reflects their confidence in business. Farmers who own two or more hectares of land are more confident in their performance. Their confidence is shown in how they are proud to say that through the banana business, gradually, they can buy a car, renovate or build their house, and enlarge their warehouse [for collector]. Dyad members do not keep financial records at all. Therefore, their performance is based solely on their own rough estimation.

Interestingly, when asked to compare their financial performance to that of competitors, regardless of farm size, farmers feel they are neither better nor worse off than others. In contrast, one of the two collectors said that she is at the same level as her competitor while the other collector said that her performance is better than competitors. The first collector is actively searching for banana whereas the latter only sits at home waiting for farmers to bring her. But the latter admits of having more than 100 farmers. The confidence in the loyalty of farmers makes the latter collector believe that she is more competitive than other collectors.

4.1.5.2 Cost performance

In terms of cost, farmers could only estimate the total cost and cost of damage. There is a slight increase in the total cost due to the increased price of herbicide and increased farm size.

The cost of grass poison also increases while the price of banana goes up and down.
(Farmer 10)

Compared to the previous years, my cost now is much higher because my field is expanding. Bottom line is, the wider the field, the higher the cost.
(Farmer 12)

The loss due to disease is higher compared to 2 years ago. In the past, it was hundreds of trees but now thousands of trees are infected. It wasn't this much in the past.
(Farmer 12)

4.1.5.3 Quality performance

In terms of customer complaints, farmers admitted that complaints are usually in regard to quality; but, despite the complaints, collectors still take all bananas. Farmers who supply 80 to 240 hands of banana generally receive fewer complaints in comparison to farmers who supply a larger quantity. Due to its small size, a customer may choose to buy only the big size ones while for farmers who supply more than 1,000 hands, sorting is inapplicable.

Customer response time and lead time are generally immediate and very short. The percentage of fill rate is generally high according to dyad members; however, this cannot be measured correctly because customers never specify a particular order. They request banana and the farmers meet the order as much as they can without any specific target or pressure. The order is fulfilled when a farmer can bring bananas irrespective of quantity. Unspecified orders also make the indicator of accuracy not applicable.

4.1.5.4 Operational productivity

Out of eight measures of operation productivity, only total productivity is applicable. Generally, farmers relate productivity with the expansion of their banana field. Farmers who rate their productivity as high admitted that the size of their banana field grew within the previous 2 years and that they had managed to reduce the impact of banana diseases. Out of 12 farmers, only 2 experienced farm expansion while the rest admitted there was no substantial increase in operational productivity.

4.1.5.5 Comparative performance

Generally, dyad members perceive their performance as similar to that of their competitors. However, in terms of financial performance, one farmer admitted his performance is less than other farmers in his village because he has less capital. Since capital means money, it can be assumed that the farmer associates performance with general farming income rather than from banana plantation alone.

More than half of the farmers in this area have more capital than me.

(Farmer 2)

On the other side of the dyad, out of the two collectors interviewed, one collector reported there was no difference in financial performance between her and her competitors, whereas

the other collector believes she is 50% more competitive than her competitors because the size of her business is larger than that of her competitor. This shows that competitive financial performance is influenced by the size of business which is closely related to the number of farmers working for a collector.

In terms of customer service performance, all dyad members admitted that there is no difference between them and their competitors.

4.2 Collector-Wholesaler Dyad

The second dyad examined in the banana supply chain in Indonesia was that of the collector-wholesaler relationship.

4.2.1 Selection of partner

The main criterion a collector uses in choosing a long-term customer (wholesaler) is the customer's capability to complete payment in due time. Since there is no legal guarantee between a collector and the wholesaler, the collector minimizes the uncertainties of payment by making sure he knows the location of the wholesaler's house so he can track down the wholesaler should any payment issue arise.

So my money flow doesn't get stuck, I am not afraid they won't pay. Even if their payment is a bit slow, they will pay by all means anyhow, such as instalment. I've heard many collectors are not paid by their customers although I have never experienced it. As for me, before shipping bananas, I have to know a buyer's house. I am thorough/careful so I've never had money ripped off from me. You know, sometimes people don't pay up to 25 million, 20 million or 15 million; isn't that a big loss?
(Collector 1)

On the other hand, a wholesaler uses three criteria in choosing a collector; product quality, honesty in hand counting and procurement price.

- Quality of product

Generally, a wholesaler prefers to deal with a collector who has bananas of high quality because that directly will influence sales. The higher the quality of bananas, the more attractive they are to the wholesaler's customers.

- Honesty

Honesty, has two important features. Firstly, it directly influences profit, and secondly, it shows a collector's trustworthiness and good will in business.

The main thing, I want good quality of banana and supplier who doesn't lie which mean if the bananas are 1000 hands, 1000 hands it is, he should not count less than that. Because there are suppliers who say 1000 hands but after recounting it's only 700, it causes us loss, he doesn't care. An honest supplier will say 1000 when it is 1000. (Wholesaler 2)

Yes, I do have preferred supplier. His counting matches ours and his bananas are good. (Wholesaler 3)

- Procurement price

Procurement price, the third criterion, is important to the wholesaler because it, too, directly affects profit.

We consider the price. If it is profitable for us, we go on with the business. (Wholesaler 4)

4.2.2 Supply chain activities

The collector-wholesaler dyad in the supply chain covers a range of issues, as follow.

4.2.2.1 Procurement

The wholesaler sends orders through use of a mobile phone. However, once the collector and wholesaler decide to become regular partners, they usually agree on a fixed schedule of delivery; e.g., two or three times a week. In this case, the wholesaler does not need to send regular requests for bananas.

Price negotiation is done in the first transaction. The agreed price is used in the following transactions. Thus, once the price is settled, it doesn't change for a long period of time.

In terms of price, it doesn't change from last year's price. (Wholesaler 1)

4.2.2.2 Transportation

Before shipping bananas, a collector usually informs the wholesaler one day earlier by means of mobile phone. Bananas are shipped in bunches roughly loaded by the collector's employees onto the bed of a pick-up car. The person in-charge arranges the bunches by stepping on them to push them down to ensure no space between the bunches. When the piles of bunches are set, they are covered by plastic tarpaulin and tied.

There is no air conditioner installed in the cars, though the current method of transporting banana has been going on for many years. An air-conditioned car/truck is too expensive for collectors and they believe that it is not necessary.

4.2.2.3 Storing

Once the collectors' goods arrive, the wholesalers' staff unloads the bananas while counting them. Bananas are stored in the wholesaler's warehouse in three different methods depending on the variety of banana.

- (i) Uncovered and bare on a cement floor
- (ii) Bottom cover – in large baskets covered by dried leaves
- (iii) Air-conditioned room – Yellow Ambon

The third storage method was found only in one market in Jakarta where the bananas are kept in an air-conditioned room. Moreover, this method is used only for the Yellow Ambon variety.

The ones from Lampung are called Green Ambon because they are unripe. Once they are here, we call them Yellow Ambon. Without the treatment (cool storing), they will stay green when they are ripe. But if we process them, putting them in an air-conditioned room, they will turn yellow after three nights. This is how the process goes: Once we receive them, we keep it outside for one day. Then we put them in the air-conditioned room for 3 nights 3 days; once they are out of the room, they are yellow. If we don't put them in the air-conditioned room, they will stay green when they are ripe. What's the difference? If they stay green when ripe, the hands fall off easily because Yellow Ambon originally weak and soft. (Wholesaler 1)

There are many wholesalers in Jakarta use Aircon. But it's only for Yellow Ambon banana. Other varieties can stand without AirCon but the fingers of Ambon will fall out without AirCon. Ambon banana contains lots of water, without AirCon, the fingers will fall out before they turn yellow. (Wholesaler 1)

4.2.2.4 Payment

The method of payment varies. There are three common methods of payments:

(i) Cash

Cash payment is made after a wholesaler finishes counting the number of banana hands. As soon as banana arrives at a wholesaler's shop, both collector and wholesaler witness the downloading process. Once the downloading finishes, collector and wholesaler sit together

to discuss the total value of the bananas. When both reach agreement, the wholesaler then proceeds in paying collector.

(ii) Bank transfer

Payment through the bank is a preferred method of payment by inter-island traders and the driver of the truck/car is not the collector himself. Bank transfer keeps collectors and wholesaler from misunderstandings over the payment.

(iii) Installments

Payment according to an installment agreement is taken when the wholesaler is unable to pay in full. Usually, the wholesaler will pay half the monies owed on the day of transaction and the remainder at the next transaction.

4.2.2.5 Coordination & communication

The only communication device used is a mobile phone. The collector and wholesaler do not share strategic information. Rather, they communicate only to confirm shipping time and settle differences in counting.

We coordinate only through using the mobile phone. (Wholesaler 4)

4.2.2.6 Supply chain governance

The collector-wholesaler dyad is characterized by collector dominance in terms of the time schedule of shipping, quantity of bananas delivered and the mixture of varieties delivered.

“My customer never complains: ‘here we have circumstance blab la sales are down bla bla’, he never does that. He never argue, everything is up to me.”
(Collector 1)

With regular supplier, we can’t place order as we like. If supplier has ample stock, she will definitely send me bananas but if she is out of stock or doesn’t have enough supply to ship, no matter how much I push it, she won’t ship it. (Wholesaler 1)

Time of delivery is determined by the supplier. (Wholesaler 5)

The quantity of each delivery for each of his buyers is determined by the collector. (Wholesaler 5)

The variety of banana she sends me is a mixture. Regarding the composition, the variety and the quantity of each variety, it's not up to me to decide. It's up to her to decide. I accept whatever she says and she has in her warehouse. I cannot tell her, for instance, to bring me a certain amount of Ambon, Raja or Kepok bananas. Bottom line is, I accept whatever she sends me.
(Wholesaler 1)

4.2.3 Uncertain environment

4.2.3.1 Agility Drivers

Agility drivers are measured basically from the dyad members' perspective on technology changes, adaptation to meet customer value, uncertainty, degree of variation, competition, and the issues regarding hygiene and food safety, traceability, fair trade, sustainability and fairness.

(i) Technology changes

Dyad members stated that there is no change in the technology used in their supply chain. This included technology regarding transportation, selling method, storing/inventory process, cold chain, packaging, labelling, food safety standards, sustainability system and information system.

There is no change around here. Everything is just like the past years. Even in the way I transport banana or pack/pile bananas for shipping, there's no change.
(Collector 1)

Nothing's changed. People still use pick-up car. In the past, I used to load thousands of banana hands from Sangkulirang that I had to use truck. Now, I just bring the bananas from the port by car myself. There's no change to piling bananas onto the cars; bunches of bananas are stepped on/trampled as usual.
(Wholesaler 2)

(ii) Hygiene & food safety

Hygiene and food safety is very important to both collectors and wholesalers. They improve hygiene and food safety in their system by cleaning up the warehouse or store and the bananas. This suggests that the collector and wholesaler's view of food safety is limited to the cleanliness of place and product.

The important thing to do is to take away products that has black spots or is mushy/soft or so the bananas don't look black or mushy. Safety and environmental hygiene is the responsibility of the market management, it's not my business.
(Wholesaler 1)

(iii) Traceability

Traceability is not applicable in the dyad. All collectors and wholesalers stated that traceability is not important for them. They can only identify their immediate supplier or customer and the region from where the bananas come. Their record only covers the date and quantity of banana of each delivery. The recording is hand-written in a note book.

Every lot shipped is recorded in a book. There no use of computer. I only record the total of banana shipped to every wholesaler. (Collector 1)

I only take note of the day, date and the number of hands of each incoming lot because I might be mistake if I don't do it. (Wholesaler 2)

(iv) Fair trade

Dyad members associate fair trade with the way the business is conducted. This includes being honest and fair to partners; factors which lead to mutual profit.

Fair trade means mutual profit for both side and being honest to each other. (Wholesaler 3)

There is no such thing as fair trade because people trading differently. Some people are honest and some are not. If all tradesmen are honest, then it is fair for all. Honest tradesmen are rare. (Wholesaler 2)

In terms of fairness, collectors and wholesalers have a similar response that, so far, they have received somewhat fair treatment from their partners. This is based on the perception that, although ideal fairness does not exist, the transactions as a result of the relationship have been somewhat better than satisfactory.

(v) Sustainability

Dyad members relate sustainability to maintaining a good business relationship. The key to sustaining business is to develop a good and close relationship with a high level of trust between partners.

Sustainability is trading with trust because without trust business cannot sustain. If a partner lies, the relationship may end. (Wholesaler 2)

(vi) Customer (wholesaler) preferences

Out of 13 measures (viz., product safety, convenience, fair trade, consistent product quality, competitive price, high quality product, range of products, reliable delivery, packaging,

speed, flexibility, promotion and customer service), a high quality product, consistent product quality and speed are what the customer (i.e., the wholesaler) values highly in the collector-wholesaler dyad.

(vii) Adaptation

Although the collector is fully aware of what wholesalers value the most, there is no change in the way collectors carry out activities in order more continuously to meet customer preferences. It is confirmed by wholesalers that collectors do not change their way of doing things just because a wholesaler has complained about it.

4.2.3.2 Competition

Competition contributes to uncertainty in the supply chain. As a collector competes with other collectors and the wholesaler with other wholesalers for the supply of banana, transactions become uncertain. Competition leads to opportunistic actions by third parties. A collector may choose to sell banana to another wholesaler who offers a higher price or a wholesaler may deliberately offer a higher price to a collector who already has a regular wholesaler. Wholesalers compete not only for banana supply, but also for markets. Market competition influences sales and wholesalers are unable to predict sales which, in turn, makes revenue unpredictable.

(i) Increased competition

Competition is mainly caused by two factors, the increased number of similar businesses and production; e.g.,

- Increased number of traders

All collectors have admitted that the number of collectors in one village has increased significantly. Similarly, wholesalers also stated that more wholesalers are found in the same market, with the wholesalers' stores side by side in the markets.

Competition has intensified I believe. There are more wholesalers in this market now.
(Wholesaler 4)

Competition increases in terms of the number of similar traders as me.
(Wholesaler 1)

- Production

Banana production has undergone some changes due to certain diseases that have spread massively in some regions. This has increased banana prices and intensified supply competition in the infected regions.

It is like a competition; whoever pays the highest will get bananas. The number of bananas decreases, price increases, it is now difficult to sell and find bananas. In the past, there is no supply problem; I could also get bananas from Teluk Dalam.
(Wholesaler 2)

(ii) Responding to competition

Despite the tough horizontal competition, collectors and wholesalers signified that they are not bothered by competition; that they do not pay much attention to their competitors. This is shown by the response of dyad members to competition. They rate competition as high, but they indicate that they have no competitive pressure. This response is underpinned by three factors:

- Accept the circumstances

Dyad members are aware of the limited resources and the person's inability to do much to change the situation. Therefore, the focus is on making the most out of the remaining resources that one has.

Competition is indifferent to me. It was easy in the past because there were plenty of bananas but now banana is less. What can we do? It's just the way it is. At least I can get banana to sell although it's not that much anymore. I want to compete but how can I compete when I am not able to?
(Wholesaler 2)

- Enlarged market for banana

Along with the increased number of wholesalers, the number of retailers also has increased. This makes wholesalers less worried about finding markets despite the competition among wholesalers.

The banana business is busier now, many sellers and many buyers. There are more retailers in fruit stalls along the streets now. So I don't need to worry with the increasing number of wholesalers because the number of retailers also is increasing.
(Wholesaler 4)

- Religious belief

The belief that God has assigned everyone his or her own fortune keeps dyad members from worrying about the affect of competition on his business and, thus, not doing anything in response to increased competition.

It doesn't change anything. I run my business as usual. It also depends on each other's fortune. We cannot ban/forbid anyone from going about their business, so nothing is exceptional/extraordinary about it. There is always competition in any kind of business.
(Wholesaler 3)

4.2.3.3 Reporting on capability to compete

Out of two collectors interviewed, one mentioned that their capability to compete was 'high' while the other regarded their capability as somewhat similar to that of their competitors. The difference can be explained by the collector's working style. The collector who is more competitive is very confident in her farmers. She has more than 100 farmers but she just sits at home and most farmers bring bananas to her. Apart from that, this collector also has three regular customers. In contrast, the collector who is less competitive actively searches for bananas to neighboring small-scale farmers, but she delivers bananas to only one regular wholesaler.

Out of four wholesalers interviewed, one declined to rate his competitive ability, one wholesaler mentioned there is no difference between her and her competitor, while two think they have a high competitive ability. The wholesaler who places herself at the same position with her competitor has experienced a decreased supply in the last few years that makes her think that her competitive position in the market is down compared to that of previous years. Meanwhile, wholesalers who believe they have a higher ability to compete are relatively bigger in scale and, among their multiple collectors; they have one very responsive collector that they can contact anytime they need additional supplies.

The main supplier is the one from Sambera delivering me Maui banana. Whenever I'm running out of stock, I just call him, and straightaway he can provide me with banana. For instance, if I call him today, tomorrow he will come with banana provided it doesn't rain. But if it rains he will come the following day.
(Wholesaler 3)

4.2.3.4 Dynamic capability

This section provides insights of the dyad's capability to be agile in addressing its dynamic environment. Dyad members' dynamic capabilities are measured based on their perspective on supply chain complexity, ability to innovate and competitive ability.

(i) Supply chain complexity

Supply chain complexity is measure by how dyad members perceive the complexity of procurement (communicating order, price negotiation and payment) and transportation (communicating delivery, transporting bananas, cold chain and storing method). Generally, collectors and wholesalers rate supply chain activities as 'very simple'. Only in one case did a wholesaler suggest that price negotiation and communication were anything other than very simple; i.e., in both categories the wholesaler's rating was no higher than 'simple'.

(ii) Capability to innovate

The opportunities for dyad members to innovate was reported as 'low'. When asked to rate their capability and capacity to modify or innovate in areas of: distribution, labelling, food safety, marketing, fair trade, storage rooms and cold chain, collectors and wholesalers rated their ability as extremely low, for a number of reasons:

- Physical limitation

Wholesalers, who occupy certain spaces in a market, are unable to expand their current space due to the restrictions set by market management.

I want to extend my kiosk but I stumble with the rule in this market, so I can't do it. Now, the space for every kiosk square is limited. I want to extend mine but they say it will interfere with that street. (Wholesaler 2)

- Risk averse

Innovative actions entail risks and require a change of system. Although all equipment and capital are accessible, the inability of dyad members to predict for the future makes them reluctant to innovate.

I don't process banana. ... Although they provide the capital, I rejected the offer. I don't want to be in debt because I don't know the future. Who knows, something bad may happen to me in the future. (Collector 1)

- Potential competition of local variety and Cavendish banana

The ability to maintain two product lines is low. Thus, developing a new partnership for a new product line can be a threat to a long-term relationship and put the current wholesaler at risk. While there is no guarantee of a sustainable relationship with a new partnership, maintaining the relationship with the current business partner seems to be a better decision.

He wanted me to be Cavendish wholesaler in this market. It is of superior quality, with label and clean, unlike these bananas of mine that has black spots. However I didn't take the offer not because it was expensive. I reasoned, if I took it, my current banana would be inferior to Cavendish. If I also took Cavendish, my own banana will be neglected and there was no guarantee that the partnership will go on forever. (Wholesaler 1)

4.2.3.5 Supply chain uncertainty

(i) Sources of uncertainty

In the collector-wholesaler dyad, supply uncertainty is more prevalent than demand uncertainty. The delivery schedule is fixed and whenever demand arises beyond this schedule and the collector is unable to comply, it does not affect the relationship. Supply uncertainty, on the other hand, affects the wholesaler's business. Supply uncertainty includes variation of quantity and an uncontrolled delivery schedule where the time of delivery does not allow for just-in-time arrangements.

Sometimes this month quite many then the following month quite decrease. I don't understand what it is like that. (Collector 1)

The quantity of banana is not always the same, sometimes it's much but sometimes it's less. (Wholesaler 4)

Supply is not consistent every month because sometimes the supplier who is supposed to come every 4 days, comes 2 days after the previous delivery. Sometimes the supplier comes when I am oversupplied; sometimes the supplier hasn't come when I am out of stock. (Wholesaler 1)

The uncertainties of quantity and delivery schedule are caused by:

- Mixture and quantity uncertainties by the supply from farmers

Since there is no grading or sorting by the collectors, the mixture of bananas received by the wholesalers is exactly what farmers have delivered to a collector.

Farmers bring mixed bananas. There is one or two brings only White Ambon but many bring mixed of Tanduk Banana, Lilin Banana and White Ambon.
(Collector 1)

The variation of quantity delivered depends on the how many the farmers harvest. If they harvest considerably, I will receive a lot of bananas, but if their harvest a little, I will receive a little.
(Wholesaler 2)

- Supply uncertainty by weather

Unpredictable weather affects the delivery time and the time taken to deliver which directly influences the quality of bananas when they are expected to arrive.

Uncertainty of supply depends on the weather or sea waves. Sometimes if the wave is too high, the ship fails to sail. But when the sea is calm, if seller sail this evening, he will arrive tomorrow morning. Another delay in supply is sometimes caused by the difficulty of the carrier car to access the jungle where farmers usually have their banana plantation.
(Wholesaler 2)

- Collector's one-sided decision

Regardless of the length of partnership, the collector seems to have the authority to determine when to deliver bananas based on their availability.

I just ship the banana, there's no need for coordination. Just as the lot ready to be shipped, we send it, and that's it.
(Collector 1)

- Third party opportunism

Wholesalers are under the constant threat of opportunism from a third party. The wholesaler normally waits in the market due to a lack of employees to wait at the port which is located in another city. This may create an opportunity for a distributor to sell the bananas to other opportunistic buyers at the port. This issue is made possible by the absence of a legal contract.

There are annoying people at the port who offer a higher price to my supplier. They would say 'Let me take your bananas for Rp. 5,000 per hands instead of you giving to your regular customer for Rp. 4,000 per hands'. That is Rp. 1,000 difference.
(Wholesaler 2)

(ii) Outcomes of uncertainty

The uncertainty of supply has an affect on the wholesaler's income. The variation of quantity a collector delivers also creates a variation in the wholesaler's monthly income.

Sales differ from month to month because of the quantity difference in incoming bananas. (Wholesaler 3)

When the demand for banana is uncertain due to the competition from seasonal fruits or low demand following the end of Eid days (biggest Moslem celebration in the country), the wholesaler reduces the price of bananas. This strategy is taken because the longer the banana is kept, the lower the value, which might lead to high waste.

When it is a bit quiet, I'm not fussy; I sell my banana for a little margin, that's all. It's the same strategy elsewhere. (Wholesaler 3)

(iii) Coping with uncertainty

Uncertainty is inherent in the dyad. To compensate for the uncertainty of supply, the dyad has a mechanism to reduce the impact through after-sale negotiation. In addition, should the collector be unable to deliver banana due to a shortage, the wholesaler might outsource in order to secure a supply while the collector facilitates an after-sale negotiation.

- **Becoming an opportunist**

During uncertainty of supply, wholesalers can act opportunistically by paying a price to ensure stock availability. The wholesaler, proactively, can approach a collector who might already have a regular wholesaler and offer a higher price. The objective of this action is not to develop a relationship with the new collector; simply to have a one-off transaction.

I never run out of banana. If the Palopo supplier doesn't have banana, I can find other supplier. It's easy to find alternative supplier. It's easy because I pay higher. So if bananas are running out, just increase the price, easy. Yes, we pay the price when banana is in shortage because they (alternative suppliers) certainly look for higher revenue themselves. (Wholesaler 4)

- **After-sale negotiation**

Generally a wholesaler is a product-taker. Once a collector and a wholesaler become regular partners, the wholesaler is bound to take and then sell the banana in any condition and composition that the collector sends at any given time. This uncertain delivery seems to leave no room for the wholesaler to bargain. However, there is a way for wholesalers to compensate for uncertain delivery. The wholesaler asks for a postponement of payment and for the loss of sales to be shared.

Yes, there is compensation for a supplier's uncertain delivery. I can negotiate like this: For example in a situation where the money of the sold bananas doesn't match the amount stated in the payment invoice, me and my supplier have a way to tolerate things, including considering whether I pay less to my supplier. And, also, if my sales are a bit low, postponing the payment is acceptable.
(Wholesaler 1)

- Sharing losses

Uncertainty of supply is often caused by transportation uncertainty. Poor infrastructure and transportation conditions often damage bananas, so that when they arrive in the wholesaler's depot, they are not as the wholesaler expected. Although shipping is organized by the collector, shipping delays or poor shipping conditions are considered external factors that it is not fair for anyone to bear alone. The loss of damage, then, is shared by both parties. This sharing of loss requires understanding and willingness to tolerate from both parties.

When some of the shipped lot are discolored due to heat I usually call him on the phone "Sir, I reduce the payment I sent you because many of the bananas turn to black". He would say "Yes Mam, that is alright". So if for example there are 100 hands of black bananas, we divide the cost into two, 50 hands each that it will not be heavy on him because we share the loss equally. If I say "No Sir, I don't want to pay for the 100 hands because they are black" he might cease from bringing me banana. But if we share the loss, it's togetherness, understanding each other.
(Wholesaler 2)

4.2.3.6 Future challenges

The ability to identify future challenges may reflect on the ability of the supply chain to be agile in the face of uncertainty. In this dyad, the prediction of future challenges is influenced by the 'wait and see' attitude of supply chain members towards the future of their business.

I don't know about the future. So far, my way has been just like this. If God decides I get more capital for the future, well, that's my hope. But if not, what can I do then?
(Wholesaler 1)

Well, we don't know for the future. Regarding cost, we'll just deal with it.
(Collector 1)

Nevertheless, dyad members admitted that there are challenges that may impact on supply chain members' businesses in the future. These include:

- Pressure to drive down cost

Dyad members acknowledge the possibility of cost increases in the future. Increases in cost affect the purchasing price which automatically impacts on the selling price. The selling of bananas at a higher price puts supply chain members at risk of having a decrease in demand.

- Difficulty in accessing capital for growth and productivity

Operators working in small scale businesses usually have low levels of profit. This makes it difficult for them to grow as it takes a long time to be able to have enough capital to expand the business. On the other hand, some operators, although they have enough capital to expand, are physically limited by space.

- Managing supply chain and operational complexity

The challenges in the managing supply chain are not caused by the complexity of supply chain activities, rather by the uncertainties involved in the activities.

- Flow of product

The biggest challenge the dyad faces is the maintaining and improving the flow of product. Uncertainty in production and competition is the main challenge that will significantly affect the dyad members' business.

The biggest challenge is when the banana supply is low. (Wholesaler 4)

- Management factors

Furthermore, there are several factors that, according to the actors in the dyad, are not applicable in the banana supply chain. These factors are:

- Compliance and regulation
- Application of a food safety system
- Improving quality assurance system
- Installing traceability

There's no such thing as quality assurance in market like this. Everything is traditional. (Wholesaler 3)

No need to comply with anything. ... As far as I know, the authority never imposes any regulation (Wholesaler 3)

4.2.4 Relational Factors

4.2.4.1 Satisfaction

Dyad members associate satisfaction with profit. A collector tends to base the idea of profit from the result of a transaction, while wholesalers tend to have expanded their perspective of profit beyond a single transaction. Profit is made when a trader is able to satisfy his customer. As such, satisfaction is achieved when both parties mutually profit from the transactions.

In terms of profit it is not bad. I feel satisfied based on the result or profit.
(Collector 1)

I am satisfied when my customers are satisfied. As a trader, satisfaction is in the profit gained.
(Wholesaler 3)

Both supplier and customer profit; in that way the business can go on.
(Wholesaler 1)

(i) Factors influencing satisfaction

The level of satisfaction in this dyad fluctuates as it is influenced by daily business activities. These include:

- Reliable supply

Wholesalers' satisfaction is influenced by the ability of collector to have bananas regularly delivered to them.

With my supplier from Palu I am 100% satisfied because he rarely not supplying me, except when growers do not harvest in certain days like New Year or Eid day. Apart from those days, he does not supply me unless the ship is out of order. If the ship runs well, he doesn't fail to supply me, only when he is sick.
(Wholesaler 2)

- On-time supply delivery leads to customer satisfaction

Having many customers satisfies wholesalers. One way to increase the number of customers is by ensuring availability of stock. Thus, the ability of a collector to provide on-time supply delivery positively increases the wholesaler's satisfaction.

Yes the satisfaction over the relationship with main supplier increases by 30% because now I have many customers and I never run out of stock.
(Wholesaler 3)

- Good quality product

The wholesaler's satisfaction is highly influenced by the quality of product received. The better the quality of banana, the better the sales.

I am satisfied when the quality of banana is good, big in size, good, not withered. But if the bananas are withered, ripe unevenly, it's a loss. Depends on the product, if the product is good, I am satisfied but if the product is bad, I'm not satisfied. (Wholesaler 2)

(ii) Dissatisfaction causes

There are several factors that cause dissatisfaction between a collector and a wholesaler. These include:

- Unresponsive collector

A collector's unresponsiveness refers to a collector's inability to deliver banana as expected by the wholesaler. In other words, a collector's schedule does not meet the wholesaler's needs; rather, the wholesaler is the one who must wait for the collector.

Sometimes when I need banana, I tell her, 'come on Mam, please ship the banana now' and she would answer 'no, sorry Sri cannot do it now'. It is good if she would say, 'OK, I will do my best', that is good. Sometimes, it's the other way around, I still have plenty of banana here and she happens to have stock, she would ship bananas to me although I say not to. (Wholesaler 1)

I am disappointed when he does not strive to collect banana for me. (Wholesaler 4)

- Customer's failure to complete his/her payment

Postponed payment is a common practice between a collector and a wholesaler. The failure of a wholesaler to settle the payment directly leads to dissatisfaction.

With customer: It often happens. I'm less satisfied when they buy this much but when they have sold them all, they pay me less than they are supposed to. (Wholesaler 1)

- Broken promise

Due to the absence of a contract or written agreement, dyad members refer to their verbal business agreements as promises. The failure to keep these promises leads to a decrease in the level of satisfaction.

In terms of promise, he promised but didn't do it. Sometimes there were not enough bananas there to ship. He said the shipping was not ready, the lot was not full but to tell the truth there are many bananas to find in the village.
(Wholesaler 4)

(iii) Dealing with dissatisfaction

Dyad members tend to cope with dissatisfaction, but not by using extreme actions; rather, they try to react calmly by accepting and bearing with the situation or discussing it with their dyad partner.

- Accepting dissatisfaction

By accepting the collector's shortcomings, a wholesaler tries one's best to utilize/sell whatever stock s/he has and looks for possibilities to fulfill any immediate need should a regular collector be unable to provide what is needed. On the other hand, a collector also accepts dissatisfaction in cases where the collector only has one wholesaler.

A businessman has to be strong in dealing with such situations.
(Wholesaler 4)

Well, the collector will work it back to me because he doesn't have any other place to ship his bananas when the demand is low in the low buying season.
(Wholesaler 4)

- Discussion with partner.

Whenever either party feels dissatisfied, the tendency is to talk it over with their partner to achieve understanding. When both parties achieve mutual understanding, they are likely to compensate each other. Thus, they maintain their personal as well as business relationships.

If I feel dissatisfied, I will immediately tell her (the supplier), I don't wait until tomorrow.
(Wholesaler 1)

4.2.4.2 Trust

In the collector-wholesaler dyad, trust is associated with different meanings based on the influences of one's own experience. This includes trust in the partner's good will, competence and commitment.

(i) Defining trust

- Trust is telling the truth

To dyad members, trust means not telling lies during a transaction, particularly in regards to the quality of the product.

It means only one thing, not lying. If the product is good, it is good but if it is bad, tell me that is bad.
(Wholesaler 2)

- Trust is doing business without cheating;

Trust is also interpreted as not cheating. It is believed that by not cheating, both sides will prosper mutually.

I think it's when the transaction prospers both sides and both have an equal share of the profit. It is when both I and supplier count right and there's no cheating each other.
(Wholesaler 3)

- Trust is the ground of business

Trust is viewed as the foundation of business.

Trust is the ground of business.
(Wholesaler 1)

- Trust is being loyal to partner, leading to a partner's commitment.

Trust is also associated with loyalty. It refers to not switching partners, even when there is an opportunity to do so.

We always have to maintain trust. So we always loyally send to him and he never deviate to others.
(Collector 1)

- Trust means receiving a high quality of product

The competency of a collector to deliver continuously what the wholesaler wants determines the wholesaler's trust in a collector.

We judge from the quality of the product, if it is good, we then trust.
(Wholesaler 4)

(ii) Forms of trust

Trust reflects in the way intermediaries transact with their partners. Trust comes in various forms such as:

- Lending money to a collector

Sometimes when he needs money I send it to him. Yeah when he needs money to buy something or as capital to deliver bananas, I send the money to him. He pays me little by little. (Wholesaler 2)

- Allowing wholesalers to postpone payments

This form of allowing regular wholesalers to pay after they have sold out the banana they buy is underpinned by sympathy over the wholesaler being low on capital.

Trust is like when a customer comes to buy banana of certain value. He take the bananas and can pay me once he has sold out the banana. That is trust. The important thing is, he pays the correct amount according to how much lot he takes. (Wholesaler 1)

Allowing buyers to pay by invoice. I trust these people 100%. None of people here doesn't pay (their debt). But it takes patience, we cannot force them to pay when they don't have any money so they pay with whatever money available. I take whatever money they pay me and write it down in my book. With little by little payment, the debt will decrease. (Wholesaler 2)

Not all buyers can pay later, only the regular buyers that I have already known. I allow them to pay later because I know they lack of capital. (Wholesaler 4)

- Attitude of acceptance

A wholesaler may develop a strong personal trust with the collector. This kind of trust could make the wholesaler believe in the collector's integrity to the extent that the wholesaler does not think of doing a re-check on the lot delivered.

I trust my supplier completely. I don't argue with whatever my supplier writes on the invoice; I don't re-count the lot supplier brings. (Wholesaler 1)

- Sending money to a collector before receiving/seeing products

Another form of trust is shown in the use of advanced payment. Without any legal contract or binding between dyad members, the wholesaler may send payment through a bank transfer before the collector delivers the banana.

Usually when the sales are high, we send the money beforehand. (Wholesaler 4)

(iii) Initial trust

Trust does not develop or present instantly; usually it starts in a variety of ways. At the beginning of transactions, dyad members make a risky decision to trust their prospective partner. The decision is risky because there is no legal assurance or written contract that

governs the transaction. For the collector, trust begins from the time of the first transaction. A collector judges the wholesaler's trustworthiness based on the payment for goods. When a wholesaler pays according to the terms and agreement and the collector is satisfied, the collector's trust in the wholesaler grows

Because since the first transaction he always pays so I keep being his partner.
(Collector 1)

On the other side, a wholesaler's trust initially grows from:

- Making a risky decision

Without the written contract, the wholesaler is in a position to lose if the new collector does not ship the banana after the money is sent. In such a situation, the wholesaler chooses to trust the new collector.

Sometimes I don't know the supplier in person; for example, my Raja banana supplier who lives on another island, I don't know what he looks like. I only communicate through a mobile phone. I call him if I want to say how many hands of banana I want and how much money I send him, that's it. I don't know my supplier personally so my business with him is solely based on trust, trust over the phone. Once my portion of banana is unloaded and counted, I send him the money the following day. (Wholesaler 2)

- Past experience of working together

The relationship between a wholesaler and a collector often happened before both parties decided to be business partners. This past experience normally is used by dyad member to establish a base for their trust.

I used to be her buyer. Sometimes I could take her bananas before I pay them. So she already trusted me before I settle in this market. (Wholesaler 1)

- The good quality of collector's products

Some wholesalers admitted that they first started to trust their collector because the collector was able to provide them with a good quality of product in the first place.

He came to see me himself in the first place. People there knew me as the wholesaler in Terong Market who buys lots of banana. And his bananas were of good quality that is why we like him. (Wholesaler 4)

(iv) Development of trust

During the course of transactions, a wholesaler's trust of the collector fluctuates. The wholesaler observes the performance of the collector based on several measures such as:

- Quality of product

Issues like counting and quality of product includes size and maturity of banana. Take for instance, Kepok banana; if they are immature, it's difficult to sell them. (Wholesaler 3)

- Traders fulfil their obligation in terms of paying their debt

As the B2B relationship of a collector and a wholesaler develops, it is common for both parties to lend money to each other for various needs. The ability of the debtor to pay back the money positively increases trust in their B2B relationships.

Judging from every transaction I give him 100 for trust. Sometimes when he needs money I send it to him. Yeah when he needs money to buy something or as capital to deliver bananas, I send the money to him. He pays me little by little. If he lies to me, let it be but God will deal with him. But he always pays his debt. (Wholesaler 2)

(v) Factors weakening trust; ways of overcoming it

As time goes by, the level of trust between dyad members can increase and decrease. There are two factors that collectors and wholesalers mention as weakening their trust of their partners. These include:

- Doubtful counting

In terms of banana counting, a wholesaler generally can tolerate a collector's small miscounting on one or two occasions. However, when the miscounting is considered large, the wholesaler would initiate negotiation for compensation. If the negotiation works, the relationship is maintained; but if it doesn't work, the relationship might be terminated.

It depends on the supplier. We can tolerate one miscounting but we do not like to be cheated twice or three times. When we recount the lot and find the count match then that is fine. But when we find that his counting is too much for instance he said 750 and we find the lot is 50 short, we will ask for a discount. If he agrees, than he can continue to be our supplier but if he refused, maybe we will find other collector. So we do not directly terminate the relationship, we rather negotiate things first. (Wholesaler 3)

- Inconsistent and uneven quality of banana

Supply variation, coupled with the inability of a wholesaler to supervise the collector's activities may make a wholesaler's trust decrease. If the quality of banana is low, the

wholesaler might doubt the competency of a collector. In such a situation, trust is restored when the collector brings what wholesaler wants in the next transaction.

Sometimes his bananas are quite good, sometimes the ones in the middle are smaller. They are not constant and not even. (Wholesaler 4)

4.2.4.3 Commitment

(i) Defining commitment

From the dyad members' perspective, relationship commitment is demonstrated by loyalty, honesty, trust, working together, giving your best and consulting with your partner.

- Loyalty

Committing to a relationship is demonstrated by being loyal in continuously supplying the regular wholesaler without acting opportunistically by switching to another person.

I don't really know what commitment is, maybe similar to loyalty. (Collector 1)

I never sell banana in the market. I only bring my banana here (at the wholesaler store where interview was conducted). I don't sell to wholesaler in other market because each of them has its own regular supplier. (Collector 2)

- Being honest to exchange partner

Commitment is linked to honesty. With honesty, no conflicts will arise and thus, the relationship is preserved.

In terms of relationship between wholesaler and collector, honesty is the most important. Without honesty there will many conflicts. So 70-80% of the relationship commitment is about being honest. (Wholesaler 1)

- Trust

Commitment is associated with trust since dyad members believe that to have a sustainable business and committed relationship, both parties need to trust each other.

Trusting each other, because we don't want to do business for just 1 or 2 days, we want it to last for a long time. (Wholesaler 2)

- It takes two to work

Dyad members realize that relationship commitment is only possible when both parties involved work together. In other words, commitment is the result of mutual effort.

Both parties need to maintain honesty (be honest to each other) especially in regard to counting. Both needs to count right and supplier must maintain the quality of his product. I will buy his banana although his price is higher compared to others, as long as the quality is good. For instance, his Maui banana is Rp. 100 per hands more expensive than others but I still buy from him because high bananas are bigger than those of others.

(Wholesaler 3)

- Exchange of opinions or consultation before taking an action

Commitment is also viewed as exchanging opinions in a positive manner. The high variation in supply chain inevitably makes a wholesaler and the collector negotiate and talk over differences. A positive attitude in negotiation shows a party's commitment to maintaining the B2B relationship.

Commitment is the same as consultation, exchanging opinion, 'what if I want to do this or that, do you think I can do that? If supplier wants to have it all her way, nothing's going to work'.

(Wholesaler 1)

(ii) Development of commitment

Although collectors and wholesalers cannot measure the degree of their commitment to the relationship, they provided insights as to what makes their commitment grow. These include:

- Partner compliance

A wholesaler's compliance is reflected in the way the wholesaler accepts anything the collector sends regardless of quality, quantity and variation in variety. This portrays a pleasant and smooth transaction for the collector and encourages the collector to stay with that wholesaler.

Because we are business partners, both sides must understand each other's situation. If the price from farmers increases and therefore I increase the price to buyer and buyer accepts, that is called loyal/committed. That is why I am committed to this customer (Cipondoh) because when I say the price of banana in Lampung increases, he says OK we follow [i.e., accept it]. That makes everything easy on us. That is the point of commitment there. My customer never complains: "here we have circumstance blab la, sales are down blab la", he never does that. He never argue, everything is up to me. So both of us can do business. That is because we are business partners, so we are together in this.

(Collector 1)

- Partner's loyalty

A collector's loyalty to a wholesaler, in fact, is influenced by the collector's perception of the wholesaler's loyalty. In other words, if the collector believes that the wholesaler is loyal, the collector will be loyal to the wholesaler. As the collector returns wholesaler's loyalty, it can be said that the collector is showing a passive commitment.

I'm proud to be the supplier of my preferred customer. I am his only supplier, he doesn't buy from any other supplier from the beginning, that is why loyalty is important. I'm important to him because without me his business doesn't run. That makes me also loyal to him. He does have various collectors come to him wanting to be his supplier but he refused. Even if I am out of stock, he doesn't outsource from other collectors.
(Collector 1)

- To avoid losing customers

Maintaining the collector/wholesaler relationship is important because without a regular supply of banana, a wholesaler can easily lose customers. A wholesaler's customers want a regular and reliable supply. Apart from that, competition among wholesalers is high because their customers (i.e., the retailers) can switch to another wholesaler any time if the existing wholesaler is unable to guarantee regularity of supply. Realizing the importance of having committed partner, members are encouraged to proactively nurture their relationship while at the same time showing how committed they are to the relationship.

My relationship with the one in Sambera (Mauli banana supplier) is important because I have many customers. I have to prepare/set aside 150 hands of banana every day for a prison canteen, then about 15 hands every day and once every two days for restaurant owners, including banana maker/seller, and a lot more. Yes, relationship with supplier is important because once I fail to supply banana to any of my regular customers, they might switch to other wholesalers.
(Wholesaler 3)

(iii) Forms of commitment

The substantial form of commitment shown in this dyad is the willingness of dyad members to share losses; e.g., when poor transportation infrastructure damages banana and results in losses. A partner's willingness to share the cost of losses encourages the feeling of togetherness which leads to relationship commitment.

When some of the shipped lot is discolored due to heat I usually call him on the phone "Sir, I reduce the payment I sent you because many of the bananas turn to black". He would say "Yes Mam, that is alright". So if for example there are 100 hands of black bananas, we divide the cost into two, 50 hands each that it will not be heavy on him because we share the loss equally. If I say "No Sir, I don't want to pay for the 100 hands because they are black" he might cease from

bringing me banana. But if we share the loss, it's togetherness, understanding each other. So during the course of the years it can be said that we are getting closer. If something happens during the transportation, we share it so one doesn't have to bear it alone, so sorry if one has to bear it alone. (Wholesaler 2)

4.2.4.4 Opportunism

A collector may exhibit opportunistic acts in order to get a higher revenue or extra cash during banana counting. Since banana is priced on the average fruit size, a collector may use this opportunity to hide their small bananas at the bottom hoping the wholesaler would think that the whole lot are as big as the ones on top and pay accordingly. As such, the collector makes extra cash. In order to prevent being taking advantage of in terms of counting, the wholesaler usually can do a re-count of banana hands in the presence of the shipper.

I don't like supplier place the bad bananas in the bottom of the truck and put the big ones on top because once we unload them, we find half of the lot is bad. I don't like it, it's disappointing. (Wholesaler 2)

On the other side of the dyad, a wholesaler's opportunism is driven by the desire to enlarge the supply of banana. However this opportunistic action doesn't hurt the collector. Rather, it is a threat to other wholesalers. In order to do this, a wholesaler may secretly approach a collector who already has a regular wholesaler. It is common that the wholesaler can buy from another wholesaler when the stock is running out. But some wholesalers, instead buying from another wholesaler, can contact the collector of a wholesaler he is dealing with.

4.2.5 Performance

In order to know how successful the management of the dyad is considered to be by the collectors and wholesalers, this section provides their perspective of their performance in the two years prior to the time interviews were conducted. The performance indicators include financial, cost, quality, operational and comparative performances.

The participants were asked of their performance within the last two years prior in order to see if there is an increase or decrease in their performance from two years back to the day of the interview.

4.2.5.1 Financial performance

Overall, dyad members reported a relatively high level of financial performance based on their moderate to high cash flow and profitability. Three out of seven persons reported having a high profitability while the remainder had moderate profitability. In regard to cash flow, four out of the six experienced a high cash flow while the remaining two were moderate.

The liquidity of their business also was reported as high. The high level of liquidity does not mean that they operate a large-scale business, or own expensive assets. Rather, they operate on a small scale and do not borrow large sums of money to expand their business. While they might borrow money from others for operational reasons, their source of money is not banks, but their family, relatives or friends.

4.2.5.2 Cost performance

Overall, cost components in their business increase every year; however, the increase is not considered to be substantial.

It has been the same in the last two years. There might be a slight increase, for example, when the cost of shipping increases, cost increases, but it's very little.
(Collector 1)

Their cost performance is characterized by a moderate-to-high increase in labour and total costs in the last two years. The increase in labour cost is mainly caused by the increase in the number of persons employed and them being paid the national minimum wage.

Staff's salary has increased from Rp. 450,000 to Rp. 600,000. (Wholesaler 2)

Labour cost also increased as we didn't have staff 2 years ago. Total cost increased by 70%. (Wholesaler 3)

The increase in total costs is caused by an increase of about 30% in the purchasing price and 30-40% in transportation costs. Another component that can contribute to the total costs is the increase in kiosk rent for some wholesalers.

The price is far different from the year of 2010. The total cost of banana was Rp. 2,500 to Rp. 3,000, but now the unloading cost alone is Rp. 4,000.
(Wholesaler 2)

Compared to 2 years back, the purchasing price has increased. Two years ago Kepok banana was Rp. 3,500 per hand; now it's up to Rp. 5,000. Consequently, total cost has increased. (Wholesaler 3)

The cost component that has increased is rent. It's now 30% higher than it was last year. It increases every year. (Wholesaler 1)

Inventory carrying costs shows a slight increase. The increase is caused by having to hold bananas for a longer period, so that they are either under-priced at sale or thrown away as waste. Meanwhile, the cost of damage has not changed in the same period of time. This is because the same methods of handling and transporting bananas are used.

4.2.5.3 Quality performance

In terms of quality performance, the dyad members report being in a good state. This can be seen in the small number of complaints per year (0 to 10), immediate response time, short lead time and a moderate-to-high percentage of fill rate. On the other hand, a high degree of accuracy cannot be controlled because wholesalers cannot predict exactly what they need in regard to the quantity and quality of banana.

4.2.5.4 Operational performance

The operational productivity of the dyad can be seen through the number of units shipped or received, total productivity, transport productivity and shop downtime. Generally, the number of hands traded in the dyad has slightly increased within the past two years although it has fluctuated during that period. However, in terms of productivity, there is a small increase.

The contrast between higher productivity and lower numbers of product traded indicates the high risk of holding inventory. With a high flow of incoming bananas, wholesalers are under pressure to sell out the bananas because holding them for too long will cause higher waste or inventory-carrying costs. Selling out bananas quickly means dealing with more postponed payments which makes it more difficult for the wholesaler to control.

Oh in previous years my shipping was in Cold Diesel truck, not like now, small pick-up truck. She (supplier) started shipping bananas in small cars since last dry season, mid of 2012. Before this, when I used big trucks, my products was overflow. But there's a downside of having big stock; we couldn't control those who are stuck with their credit payment to us because if we don't sell the products to those retailers, we wouldn't be able to sell all of those bananas to consumers ourselves, as such the bananas won't

make us money. But now (with smaller lots), when stocks runs out, new stocks arrives.
(Wholesaler 1)

4.2.5.5 Comparative performance

Comparative performance with other dyads can be observed from the dyad members' views of their financial and customer service indicators in comparison to main competitors. In terms of financial performance, four out of 6 dyad members believe they have a higher profitability and cash flow compared to their main competitors; the two remaining persons declined to answer.

In terms of customer service, the dyad shows a better product support and responsiveness to the customer compared to main competitors. Primarily, this performance is caused by the collector's openness to complaints and a willingness to negotiate compensation after purchase. The dyad's responsiveness to the customer is underpinned by the way the collector gathers bananas from farmers. Should an order come, the collector can search actively for bananas around the village or provide an incentive for a farmer to collect bananas for them. Nevertheless, in regard to pre-sale customer service, it is not applicable to the dyad.

4.3 Wholesaler-retailer dyad

The business operations of wholesalers are located in wet markets; normally located in one section in a wet market. Thus, they may sit next to one another. Often, wholesalers are addressed as banana agents because they sell banana in big quantities to retailers. However, they also serve consumers who buy banana for consumption in households. In the latter case, they are operating also as retailers.

Banana retailers include those who retail banana in wet markets and streets; i.e., those who are usually referred to as 'traditional retailers'. Besides trading with traditional retailers, customers who represent supermarkets also come to the wholesalers for bananas. These retailers are referred to as a 'modern retailer' because they retail banana in supermarket stores.

4.3.1 Selection of partner

Retailers select their preferred wholesaler based on product quality, trustworthiness, flexible payment, and kindness.

- Product quality

I buy banana from several wholesalers. I pick the wholesaler who has good banana around here. When their banana arrives and I see that they are of good quality, I go to them. Otherwise, I go another wholesaler. (Retailer 1)

- Trustworthiness

It is important for retailers to be fully aware of the quality of their banana and to maintain a high quality of product because they are dealing directly with consumers. They are at risk of losing a consumer's trust when the consumer finds that their bananas that look big and good are actually immature ones or bad inside. Therefore, truthful information about the quality of product is important for retailers. Thus, the trustworthiness of the wholesaler regarding the quality of product plays an important role in wholesaler selection.

When he says his bananas are good, they are good indeed. If the bananas are of poor quality, he would tell me. (Retailer 4)

- Flexible payment

For retailers, a wholesaler who permits a postponed payment is considered as an understanding person because retailers are normally so very low in capital and they rely on banana sales alone.

She can understand when I don't have enough money to pay. She would say 'just take the bananas now, you can pay for them next time when you come again'. So yeah, understanding each other. (Retailer 3)

That's the benefit of having a regular wholesaler. If we don't have enough cash at that moment or don't bring any money at all, we can owe them the payment. We can't do such a thing with non-regular wholesalers because they won't give such exclusiveness to new buyers. (Retailer 4)

- Kindness

Kindness also plays an important role in wholesaler selection. It refers to the wholesaler's genuine care for the retailer's well-being. This perceived act of kindness may be explained by the fact that the retailer and wholesaler are originally from the same tribal village before they migrated to the current island.

If her bananas are immature, she tells me 'don't take them now, you will lose because the bananas are immature. Later when I have mature bananas you can take them. If you take these ones (immature bananas), you will incur losses. I will retail these bananas myself. She is a kind person. (Retailer 5)

*I know her very well; her house is close to mine. Even in Madura, her place is
near to mine* (Retailer 5)

The number of preferred wholesalers depends on the retailer's business size. There are retailers who rely on one sole wholesaler because in order to establish a steady relationship with a wholesaler, the retailer must meet a wholesaler's minimum delivery size. Buying a low quantity of banana is not profitable for a wholesaler because it doesn't provide enough incentive for a wholesaler to save bananas for the retailer. Therefore, to avoid low sourcing and enable one to maintain a relationship with the wholesaler, it is important for retailer to stick to one wholesaler.

*It's not good to have more wholesalers because it's not good to buy in small
quantity. Buying 300 hands is acceptable.* (Retailer 5)

On the other side of the dyad, the main criteria for wholesalers in selecting preferred customers are compliance and smooth payment; smooth payment refers to completing the payment as promised. It is important for a wholesaler to have a smooth flow of finance because that is what the wholesaler uses to pay his collector.

*I like retailers who are not fussy and whose payment is smooth. If I continue
selling banana to retailers with jammed payment, I will run out of money
then how will I pay my collector?* (Wholesaler 2)

*The [buying] price is fixed. I just accept it, I don't bargain. Bargaining price
makes us a fussy retailer.* (Retailer 5)

Moreover, the product of the supply chain is characterized by a short shelf-life. Without technology to prolong the shelf-life of bananas, it is risky for retailers to hold inventory for long. As the banana ripens naturally, the value decreases; this substantially decreases the retailer's profit. The condition is worsened by the competition faced by the retailer; as the quality of banana decreases every day, the retailer is faced with the risk of high waste and loss.

4.3.2 Supply chain activities

The activities in this dyad include procurement, transportation, storing, payment, coordination and communication, and supply chain governance.

4.3.2.1 Procurement

Banana procurement does not start from the customer's side; rather, it commences from the wholesaler's side. One day before the expected banana arrives or when the banana wholesaler prefers it to arrive, the wholesaler informs their long-term buyer (viz., the retailer) by the phone to arrange for delivery. Retailers can come to a wholesaler's kiosk and choose the banana themselves or have the wholesaler choose it for them if they are unable to come.

I call the buyers first, if they want, we'll send them (the bananas). In days like this, my bananas are on the way, I call my buyers beforehand. They can come and pick the bananas themselves. (Wholesaler 4)

So wholesalers in Daya Market unload bananas from the car before they call me to say that they have bananas and to ask me how many hands I want. After that bananas are transported here. (Retailer 2)

Although the regularities of procurement are established, for instance once or twice a week, changes of one or two days are inevitable; this implies that a retailer's procurement relies on a wholesaler's readiness.

Procurement can be done in two ways; the retailer comes to the wholesaler's kiosk to choose the banana himself or asks the wholesaler to choose the bananas on his behalf according to his usual demand specification. The latter process requires trust on the retailer's side to let the wholesaler choose the bananas for them.

Purchasing can be done in two ways, I go there to shop myself or ask them to deliver the bananas. (Retailer 4)

4.3.2.2 Transportation

From the wholesaler's depot, bananas are transported in various vehicles; the main choice being private car or public transport. Retailers usually hire a public transport vehicle such as pedicab (*becak*) or car to take the bananas to their kiosk. The chosen means of transport usually depends on the distance between the wholesaler's and retailer's kiosks. The time needed to make the purchase and have the banana delivered from wholesaler kiosk to retailer is very short. It only takes one day due to the short distances involved; thus, there is a very short lead-time.

4.3.2.3 Storing

Generally, in both the wholesaler's and retailer's kiosks, bananas are not kept in a cold storage room because their kiosks are not equipped with one, except for one variety of banana; viz., Yellow Ambon. The unripe bananas are simply put anywhere in the kiosk and can be uncovered or covered.

It is common for retailers to ripen their banana before selling them to consumers. Retailers normally use the carbide chemical to foster ripening. They spray carbide over the selected bananas and the unripe green bananas; the bananas ripen and the colour turns to yellow by the following day.

I just leave the entire banana here [in the kiosk with no storage room] and cover them with a banner [fabric/cloth cover]. No one guards the place. Alhamdullillah is safe. (Retailer 2)

I buy the bananas unripe. I give them spray carbide then after 2 days they are ripe. Sometimes when I spray them in the morning, they turn yellow the following day. (Retailer 3)

4.3.2.4 Payment

Payment is made directly to the wholesaler in cash. However the payment can be done on the day of the transaction or postponed until the next transaction. All wet market retailers admitted that they do not pay their supplier (i.e., the wholesaler) directly. Rather, they pay in the next transaction.

If they happen to have (money), they take the banana and pay for it right away. But if they don't have it (money), he take the banana and pay for the previous one (transaction/banana). To me, that is the way things run in the market. Everyone is like that. The most important thing is consistent that when we have agreed upon a certain price, later when he pays, he pays at that price. (Wholesaler 1)

The term for banana payment is 'take and pay'. So take the bananas and we pay for them at the next transaction. We pay for the previous delivery. Some retailers pay cash, take the bananas and pay for the lot at the same time but when you are regular, you take now and pay for them in the next transaction. (Retailer 1)

The price of banana in this wholesaler–retailer dyad is strongly influenced by the price in the collector–wholesaler dyad. The higher the price the wholesaler pays to the collector, the higher the price the retailer pays to the wholesaler; as one retailer mentioned,

My buying price is expensive if my wholesaler's buying price is expensive.
(Retailer 5)

However, in general, the procurement price fluctuates according to market demand; e.g., when the market demand is low/high the procurement price correspondingly decreases/increases.

4.3.2.5 Coordination and communication

The main communication device that the wholesaler and retailer use to communicate or coordinate operation is the mobile phone. Both parties communicate when the bananas arrive at the wholesaler's depot or one day earlier. The communication between wholesaler and retailer is limited only to product ordering or cancelling. Usually, it is the wholesaler who initiates communication by informing retailers that a new stock of banana has arrived. Then the retailer can place an order accordingly. This pattern of communication is caused by the variation of supply delivery on the wholesaler's side.

My regular customers usually call me one day earlier if they don't come tomorrow. With that knowledge, I can reduce the amount of banana to brood. Or if I have already brood them, I sell them to other customers.
(Wholesaler 2)

Generally when his [wholesaler's] banana arrives, he calls me saying 'I have bananas', so I go there and choose what I want, Kepok banana, Raja banana, etc.
(Retailer 3)

Except for logistic purposes, dyad members associate coordination with negotiation in solving conflicts. Conflict arises when the retailer and wholesaler have a different version of the hand calculation; the retailer refers to this as a misconception. To overcome such a difference both parties need to talk it over together without offending each other.

Coordination is like when my wholesaler or me have misconception, we can fix it together. If for example my wholesaler or me has any error, we find a way to make it right, we discuss it nicely.
(Retailer 3)

4.3.2.6 Supply chain governance

Generally, price is initiated by the wholesaler, based on the price for each grade according to banana size and the retailer is able to choose according to their preferences. Retailers accept the wholesalers' price because, as one retailer put it,

The bargaining price makes us a fussy buyer. (Retailer 5)

The relationship with wholesaler is very important to a retailer especially when the retailer feels that the wholesaler has been kind. In order to preserve the relationship, the retailer will try to keep every transaction as smooth as possible by not arguing about the price the wholesaler initiates. By doing so, the retailer demonstrates that he or she is a trustworthy partner. Dyad governance seems to be dominated by the wholesaler, since the wholesaler decides the price and the retailer is reluctant to bargain since bargaining signifies disagreement which can jeopardize the transaction. Therefore, so as to maintain wholesaler's favour, the retailer chooses to be the price taker.

4.3.3 Uncertain environment

4.3.3.1 Agility drivers

Agility drivers are measured from the perspective of dyad members, in terms of technology changes, adaptations to meet customer value, uncertainty, degree of variation, competition and the issues regarding hygiene and food safety, traceability, fair trade, sustainability and fairness.

(i) Changes

The dynamics of the market are measured based on the dyad members' perspective on the changes happening in the following areas; e.g., new varieties, selling methods, storing processes, cold supply chain, packaging, labelling, food safety standards, a sustainable production system, and the use of information/communication technology. However, although all these items apply to the market, they are less important as issues that run the length of the supply chain.

In terms of new banana products or new varieties of banana, there has been no change for years. Traders have been using the same trading techniques and trading similar varieties of banana for years although the composition of the variety of banana grown may change.

Since the past, these are the varieties I sell. There is no new variety. (Retailer 3)

Similarly, due to inter-island trading, some retailers have come to know and sell other varieties. Some varieties of banana grow well only in certain islands and are not traded in other islands. For instance, the Yellow Ambon banana is well known in Lampung and West Java but it is not traded in East Kalimantan and South Sulawesi. Similarly, Barangan banana

is popular in East Kalimantan but not so in West Java. Nevertheless, inter-island trading has made it possible for other varieties to be available to retailers; varieties that, formerly, were not feasible.

In regard to new varieties now we have Barangan banana. In the past we only had Lampung or Mas bananas but now we have Medan Barangan which is sold by retailers along the streets. That variety has been around for years, but I never buy it. Now it is spread around here.
(Retailer 4)

One retailer reported a change in the way retailers ripen banana; from covering bananas with plastic, to using carbide, to spraying bananas with certain chemicals. However, this cannot be categorized as new technology since carbide has been used for a long time and many retailers still do that. Similar to carbide, an alternative chemical that can be sprayed on banana has gained popularity because it allows the retailer to ripen fruit in a very small quantity by spraying a certain number of hands they want. But if retailers want to ripen in rather large quantities, then using carbide is better. As such, these methods can be used as alternatives depending on the user's needs.

People used to use carbide to ripe banana, but now they spray banana with chemical. In the past, people use plastic to ripe banana but now, by spraying them, they will ripe in 2 nights.
(Retailer 4)

When asked about changes, dyad members immediately associate the concept with the variations in the volume of bananas they trade. Generally, they experience a decrease in the number of bananas they receive from their supplier. The main cause for this is the issue with banana disease or virus attack in regions where wholesalers used to source bananas; thus, wholesalers are forced to source bananas from another region.

I used to get bananas myself from Bontang, Sangata, Benanga, Teluk Dalam but now there's no more of them. No bananas in Teluk Dalam, or Bontang, all were affected [by virus], unrecoverable. So if there's no banana from Mamuju [located in another island], I won't have banana to sell.
(Retailer 5)

(ii) Hygiene & food safety

Dyad members admitted that hygiene and food safety are important in their business. However, their perception of hygiene and food safety is limited to the overall presentation of their kiosk or shop, because when they were asked about their efforts in improving hygiene and food safety in their supply chain, they mentioned only about cleaning up their kiosk.

Tidying up things & put all the rubbish in the bin.

(Retailer 4)

(iii) Traceability

Traceability is not important as long as the retailer knows the region of origin of the banana because this is what consumers normally ask about.

Consumer only would ask the region where the bananas come from. There's no need to trace down the village or producers as long as we know the region of origin.

(Retailer 4)

Not important because we know the origin of the banana; for instance, this one is from bone and that one is from Pinrang, this one is from Siwa.

(Retailer 2)

(iv) Fair trade

Fair trade means different things to each member of the dyad. While some have no idea what fair trade is, others relate it to mutual benefit, to honesty and to conducting business in a clean and fair way

Fair trade means mutual profit for both side and being honest to each other.

(Wholesaler 3)

So fair trade is like doing business fair, halal means being honest. It is about how to make our product saleable continuously and how to make consumers stay faithful to you in halal/clean way. It's all about halal and fair.

(Retailer 3)

(v) Sustainability

There are three perspectives of sustainability or environmental friendliness. The first one is associated with being friendly towards surrounding people. The second is by acting in a sharing way or giving away food to neighbours; in this perception, dyad members see their surrounds as a living environment. In the third perspective, sustainability is seen as the absence of the use of chemicals in the food supply chain.

[Being] kind/friendly to people around me.

(Retailer 5)

Environmental friendly is like the situation where I have bananas that are not saleable anymore in the following day; it's better to give it to other people for them to eat it. It's even better to give it to my neighbours who happen to stop by or take it home to give it to my neighbours who can eat it.

(Retailer 3)

Environmental friendly is like using traditional methods in the ripening process, without any chemicals such as injection. I understand that it is important to grow banana trees without any chemicals so that it is safe for people who consume it. In terms of taste, chemically-treated banana is different to the original one.
(Wholesaler 3)

(vi) Customer preferences

In this dyad, what retailers value the most is the wholesaler's ability to provide a high quality product, a wide range of product varieties and grades that allow retailers to select according to their preferences, permission to buy with postponed payment and reliable hand counting. The wholesalers' ability to provide a wide range of product varieties is strategically important for retailers. There are more than ten varieties of local bananas and each has its distinct taste; consequently, consumers are variety-sensitive. The more varieties a retailer has, the more attractive he is to consumers. Therefore, wholesalers who have several varieties of bananas are valuable.

In order to maintain my relationships with regular customers, I maintain the quality of my bananas. Customers will not leave if we have good quality bananas. Price can be negotiated and arranged. For example, when the market is quiet, we lower the price and when bananas are scarce, we raise the price; it's that simple.
(Wholesaler 2)

I also have regular buyers [i.e., consumers] who come every day. They usually come and pick the bananas themselves. When I am short of banana, I strive to find banana even it is just for them to keep them my regular consumer because once I fail to provide them banana, they will certainly go to other retailers. So when I don't have banana, I will go anywhere to find them banana. What is crucial for me is when they come here, they find their bananas.
(Retailer 3)

(vii) Adaptation

Wholesalers stated that they do not change their system in adaptation to the needs of retailers; however, they do try to accommodate the retailers' need by allowing the retailers to postponement their payments.

4.3.3.2 Competition

According to members of the dyad, competition is high, caused largely by the increased number of banana traders. This condition makes it more difficult for traders, particularly

retailers, to maintain their demand/sales. Besides causing competition for supply, the increased number of traders also triggers price competition.

Now, there are too many banana traders, unlike in the past. In the past, mostly consumer came to Terong market and Curu markets for banana. But now, there are retailers even in every small street corner. That is why banana business is more difficult now.
(Retailer 1)

There are many retailers here. The number of people searching for a collector has increased, that is why the price has increased. It is like a competition; whoever pays the highest will get bananas. The number of bananas decreases and the price increases, so it is now difficult to sell and find bananas.
(Wholesaler 2)

People selling banana [i.e., retailers] are growing in number. There are many of my regular customers have switched to other banana retailers.
(Retailer 7)

On the other hand, banana consumers are also product-availability sensitive in that, although a consumer regularly buys from a certain retailer, the consumer will move quickly to another retailer once their regular retailer is out of stock. As one retailer stated,

Once I fail to provide them banana, they will certainly go to other retailers.
(Retailer 3)

Dyad members realize that competition exists inasmuch as they compare themselves to their competitors. For instance, retailers compare the number of banana varieties they have to that of their competitor. However, when asked about competitive pressure, they do not feel that they are competing or having competitors. There are several explanations for this. Firstly, dyad members do not pay much attention to competition. Secondly, they do not see other banana operators as being competitors, rather as fellow countrymen who are trying to survive by earning a living, which is better than being without a job. In other words, they see themselves in their competitors. Thirdly, dyad members may not be bothered by competition because, often, the objective of getting involved in the business is not to earn a living but rather, as a 'pastime'. Fourthly, members believe that success in business is determined by God, and God has already assigned a different success/fortune for each person. Lastly, the fact that the members' shops or kiosks are side-by-side means they develop a relationship that allows them to see their competitors as friends. During a lunch break at one research interview, the retailer (Retailer 3) was seen to prepare a lunch for herself and a neighbouring retailer. Also, during the interview, when a consumer came to the next-door kiosk while the owner was away, the interviewee helped to sell bananas and received payment on behalf of

the neighbor. As such, it makes sense that, although retailers are competing to win the consumer's heart, they are not envious of one another.

To me the competition is indifferent/insignificant. I never research how others sell their bananas; I just use my own ideas.
(Retailer 5)

I don't feel I have many competitors because as humans, we need to be grateful that others are working to earn a living. That is better than wandering around without any job. Speaking of competition, yes it is there, but aren't we grateful that they are still willing to work?
(Retailer 2)

I sell banana only for entertainment, to kill the time. My children don't want me to do this because I am not as strong as I was in the past. I don't have other things to do.
(Retailer 1)

That's fine because each person has his own fortune. I can only hope that my products are sold.
(Retailer 7)

If it is about retailing competition, in here it feels there is no competition.
(Retailer 3)

4.3.3.3 Reporting on capability to compete

The dyad members' ability to compete is influenced by several factors. These include:

- Capital

In this dyad, capital refers to money. The more capital members have, the more bananas they can buy which mean the more competitive they are.

That's how we can see the competition, to point that 'oh this one has less banana, this one lacks this and that. So it all depends on the capital you have, how you run [the business].
(Retailer 2)

- Organizational structure

Members of dyads are individuals; some of them work by themselves while others have a helper. Usually the helper can be either a family member, relative or casual worker. This issue may relate to availability of capital because while involvement of a family member is generally voluntary, the use of hired labour is not.

Other retailers have complete variety because they have someone to help them. This one [pointing to the retailer on her right] has her husband to go searching for banana. He goes to find what [variety] she lacks. The same thing is for that [another] retailer.
(Retailer 2)

- Wholesaler's consistency and fairness

A retailer's business depends on the wholesaler's ability to provide banana continuously. Despite the unstable supply of banana received by a wholesaler, the wholesaler is expected to divide the bananas equally to regular retailers.

Competition doesn't affect me as long as my collector sells his bananas at stable rate and treats me and other retailers equally. (Wholesaler 5)

4.3.3.4 Dynamic capability

This section provides insights of the dyad's capability to be agile to address its dynamic environment. The dynamic capabilities of dyad members are measured based on their perspective of supply chain complexity and ability to innovate.

(i) Supply chain complexity

Supply chain complexity is measured by how dyad members perceive the complexity of procurement (communicating order, price negotiation and payment) and transportation (communicating delivery, transporting bananas, cold chain and storing method). Members stated that their supply chain activities are simple. Procuring is simple because of its flexibility. Wholesalers usually have a fixed schedule for delivery so that retailers do not have to make an order, but a retailer also can come to a wholesaler's depot to select or pick up the bananas themselves and both parties just have to let each other know on the phone. There is no strict method; pricing and payment are flexible also. Neither the wholesaler nor the retailer has to negotiate a price because they have two alternatives; to accept the flat price or sized-based price.

Sometimes if I am late, my wholesaler calls me or sends me a text to confirm whether I would come down or not. If I say I will come, he will wait for me. Procuring process is simple. (Retailer 4)

In terms of banana transportation and storing, these processes also are simple. There are choices of vehicle to transport bananas from the wholesaler's depot to the retailer's kiosk, either by car or pedicab. The simplicity of the process is due to the small number of bananas being traded. In addition, the transportation arrangement is flexible in that the retailer can ask the wholesaler to send the bananas or go there himself to pick them up. The storing process is very simple because bananas are normally left in the kiosk when retailers or wholesalers go home. Operators do not use a cold room or give specific treatments for bananas. As one retailer mentioned, "I just leave the entire banana here [in the kiosk] and cover them with a banner [fabric/cloth cover]".

(ii) Capability to innovate

While some members have the capability to innovate or expand their business, they are limited by physical conditions such as space and electricity. Although they have adequate capital to buy the necessary equipment, they still cannot do more. Examples below show that the innovating capability of members is very low, with the physical conditions such as space and infrastructure being the main inhibitors.

The cultivar of Ambon banana is stored in the cold room to strengthen the stem, prolong the shelf life and enhance the banana skin. I also have Ambon banana but I don't put it in the cold room because the power capacity in this market cannot sustain an air-conditioner. If I install an air-conditioner in my kiosk, the power in this market will go off. (Retailer 4)

Here we cannot expand the kiosk; each one has his/her share of about 2 to 4 meters. Other space is already plotted for others. It's has been divided that way. (Retailer 5)

4.3.3.5 Supply chain uncertainty

(i) Sources of uncertainty

Wholesalers face the uncertainty of money flow from retailers. Wholesalers allow retailers to take the bananas and pay at the following transaction based on verbal promise alone, assuming retailers have made money from the bananas by then. To date, there is no mechanism to ensure retailers will complete their payment as promised. On the other hand, wholesalers cannot hold the bananas for too long; otherwise they will rot and become waste. In response to such a situation, wholesalers normally just try to calm themselves by believing that God will punish and reward everyone according to their actions.

Many people can play dirty even when we come to collect the money. If I have asked for the money several time and I get upset, I will just tell them: 'Are you paying or not? If you don't want to pay, you will bear the risk'. That's how I do it. Surely I will incur loss because I already paid my collector; definitely it's a loss to me. But I believe his fortune is cut to that point. Maybe in the future, I will have more fortune, that's it. (Wholesaler 1)

Retailers, on the other hand, are faced with unreliable delivery; this is often caused by late delivery and inconsistent quality of bananas.

It's always like that, the incoming bananas sometimes have the good ones too. Sometimes the whole lot of bananas that come are good, sometimes they are bad. So, sometimes it is good and sometimes it is bad, there is no uniformity. (Retailer 2)

(ii) Coping with uncertainty

Uncertainty is inevitable in this dyad. The uncertainty of incoming supply of bananas impacts retailer's business. Some retailers can be out of stock if the shipping is late and they have to close their shop for a few days until the next shipment arrives; members do not buy from wholesalers other than their regulars.

If the supply from my regular wholesaler doesn't meet my need of that day, I don't buy from other.
(Retailer 2)

If my shipping is late and I'm running out of stock, or if I completely have nothing to sell in one day, I would just take a rest. So I don't have to buy from other wholesalers
(Retailer 1)

Nevertheless, in anticipation of an unreliable supply, retailers may opt to establish more than one wholesaler relationship. Normally retailers have one regular or preferred wholesaler but they can also establish personal relationships with other wholesalers who serve as their back-up wholesalers. These back-up wholesalers are similar to an irregular wholesaler. Consequently, although these wholesalers are able to deliver banana, retailers have to pay a higher price as wholesalers often take advantage of the retailers' urgent need of bananas.

Everyone is like that. Although the wholesalers are not my regular wholesaler, when they know retailers are in need, even though the [market] price is Rp. 1,500 those wholesalers will say Rp. 1,700 if they know we are in sudden need, we will take the bananas anyhow. Yes, wholesaler plays the price.
(Retailer 3)

4.3.3.6 Future challenges

According to dyad members, there are four factors that may impact on their business in the future. These factors are:

- Competition in supply market

Retailers realize that competition for bananas in the supply market is high. The instability in the upstream dyad (collector-wholesaler) influences the stability of banana supply to them.

Another challenge may be the lack of product due to the competition at the wholesale level. For example, although my wholesaler has his regular farmers back in the village, he maybe unable to secure the product because the farmers sell the bananas to another wholesaler who offers a higher price.
(Retailer 3)

- Difficulty in accessing capital for growth and productivity

Dyad members gain capital or money from trading in bananas. When asked about strategy in gaining more capital, members believe that it depends on their fortune. The challenge to secure capital in the future may be significant to retailers. Generally retailers make a low profit from their business. This condition is not only caused by competition, but the short-shelf life of banana and the absence of treatment to prolong the banana shelf-life leads to a high rate of waste.

It is difficult to gain capital, but to say it's difficult is not entirely true because it depends on fortune [from God].
(Retailer 1)

- Establishing reliable relationships

The increasing number of retailers gives rise to both opportunity and risk to the wholesaler. It is an opportunity to establish more regular customer relationships but it is also a risk since the wholesaler should allow the postponement of payment to retailers. The more the number of retailers postponing their payment, the higher the risk to the flow of money that wholesalers have to deal with. Therefore, the relationship with reliable retailers is a great challenge to the wholesaler.

I want more customers. There is no problem with shipping bananas from Palu, there are many ships whenever I want. But here, it is difficult to find faithful customers with smooth payment.
(Wholesaler 2)

- Obtaining secure spot at the market place

Some dyad members face challenges regarding the continuity of their business in the market place. This applies to retailers who do not have permission from market management to erect a kiosk or stall. These retailers do not have a permanent slot in the market and, therefore, they can have their business forcefully shut down for days. Although for the time being these retailers are able to establish a secret kiosk, there is no guarantee that in the future things will not get worse.

It's from the government [market management]. For instance, as I open my kiosk here, suddenly they forbid me to retail here. It happens several times. When they do, I obey temporarily. Soon after that, I retail again here.
(Retailer 1)

Despite the identified future challenges, dyad members do not worry about the future because they have not experienced significant challenges, even though they have been trading bananas for a long period of time. In addition to that, members are optimistic in that they can always find a way to proceed even when the competition is high.

Over the years I am in banana retailing, there is actually no difficult/significant challenge.
(Retailer 1)

Competition has intensified I believe. There are more wholesalers in this market now. Banana business is busier now, many sellers and many buyers. There are more retailers in fruit stalls along the streets now. So I don't need to worry with the increasing number of wholesalers because the number of retailers also increases.
(Wholesaler 4)

4.3.4 Relational Factors

4.3.4.1 Satisfaction

(i) Defining satisfaction

Dyad members have different perspectives of satisfaction. These are:

- Profit

Generally, dyad members associate satisfaction with the profit they make from selling bananas. Dyad members realise that their profit is influenced by customer satisfaction. Their profit increases when they are able to satisfy customers by meeting the customers' needs.

I am satisfied when I sell much.
(Wholesaler 4)

I am satisfied when my customers are satisfied. As a trader, satisfaction is in the profit gained.
(Wholesaler 3)

- Peace of mind

Although dyad members' perception of satisfaction is associated with business aspects, satisfaction is derived from the feelings of contentment with the business overall. As one member mentioned;

I'm satisfied because I don't think of many things as long as I can buy food daily.
(Retailer 5)

This suggests that as long as members of the dyad are able to run their business successfully each day and make a profit, they are satisfied regardless of the size of the profit.

(ii) Factors affecting satisfaction

The level of satisfaction fluctuates. This fluctuation is influenced by several factors such as:

- Variety of stock

Retailers are satisfied when wholesalers have a large stock of bananas with different varieties that provide retailers with more choices. Thus, retailers may match procurement with their needs. The more variety of bananas a retailer has, the better the chance to win the consumer over.

I am satisfied with the number of varieties my regular wholesaler has because I have satisfaction in choosing [the varieties I want]. (Retailer 3)

I can also bargain and choose which banana I want, either I want the big ones or the mature ones. (Retailer 4)

- Wholesaler's quick response

Retailers are satisfied when wholesalers always have a stock of bananas to enable them to respond quickly to an immediate need for bananas. Retailers refer to this as quick response.

Very often I run out of banana and my regular wholesaler is able to provide me bananas ... That is satisfaction, quick respond. (Retailer 3)

- Payment

Satisfaction relates to the ability of the dyad members to sustain their business when there may not be enough money to procure a product. This reflects in the way wholesalers allow retailers to postpone their payment until the following transaction. For instance, one retailer was asked about what factors influencing satisfaction and the response was:

There are also many times when I don't have money; he still gives me banana (Retailer 1)

- Product quality

According to the wholesalers, their customers are satisfied when they are happy with the quality of bananas they receive. Although the higher quality of banana indicates the likelihood of a higher price, retailers seem to prefer buying bananas of higher quality because these bananas are preferred by the consumers. As such, customers can make a profit faster by a quick turnover of product. Therefore, the wholesaler's ability to provide a high quality of bananas improves the retailer's satisfaction.

My regular customers are happy with me because although my bananas are expensive but the quality is very good that it is easy for them to sell it. They also like me because my counting is always correct. (Wholesaler 2)

(iii) Dissatisfaction causes

Despite the long-term relationship between wholesaler and retailer, there are incidents that create dissatisfaction for both parties. These include:

- Customer's failure to settle payment

I'm less satisfied when they buy this much but when they have sold them all, they pay me less than they are supposed to.
(Wholesaler 1)

- Payment misunderstanding

Flexible payment between wholesaler and retailer sometimes leads to payment misunderstandings, particularly when one trusts the partner to the extent of not keeping a record of the payment history/balance. This is often the case with retailers when they believe that they have paid based on their memory, but the wholesaler's record doesn't support that.

In regard to satisfaction, I never feel quite satisfied because sometimes we have difference; for example, when I take his products and I pay a certain amount, later he would say I pay a less amount. That is dissatisfaction to me because maybe I have paid this much but he says that I pay him less. This often happens.
(Retailer 3)

- Wholesaler's opportunistic actions

Often, wholesalers take advantage of a high demand for bananas to make a greater profit. This is done by making up excuses to their regular customers so they can save more bananas to sell to irregular customers who normally will pay higher.

There are times when it upsets me ... during this time when we really need banana, the wholesaler gives us excuses not to give us the banana by saying that this or that banana already belong to another retailers. He [i.e., the wholesaler] holds back the banana probably because he wants a higher profit since the price for regular customer is different with that of a new customer [non-regular]. He makes profit differently from the two types of customer.
(Retailer 1)

(iv) Dealing with dissatisfaction

Dyad members have various responses to dissatisfaction, depending on the cause; some choose to be patient and give way to their partner, while others prefer to develop strategies to reduce the dissatisfaction. For example, by:

- Being patient

In response to a partner's failure to do as promised, dyad members try to be patient as a means of allowing them to endure. Often, this patience is underpinned by the person's religious belief; a belief that those who are wronged will receive more reward from God in the form of answered prayers and the transfer of sin to the wrongdoer. Being patient is regarded as a reward and referred to as a matter of 'fortune'.

Many do not pay for their banana; they run away. Being treated like that, I just be patient. That's alright. Later in the afterlife we confront them. We will receive more fortune if we are patient. (Wholesaler 4)

- Giving way to the partner

In relation to misunderstandings regarding payments, normally it is the retailer who yields to wholesaler because retailers do not keep any written proof of the payment. Therefore, the retailer accepts the wholesaler's version in order to settle the conflict, thinking that it might be a human error on the wholesaler's side.

I do have a record [of how much I owe my wholesaler from every transaction] but sometime after I pay through the wholesaler's man who comes to collect the money, that collector forgot to write it down on my debt record and from the wholesaler's notebook it seems as if I don't pay my balance. Usually to solve the problem, I am the one who has to pay, so I pay double. (Retailer 3)

- Maintaining multiple regular wholesalers

Having multiple regular wholesalers allows retailers to minimise the impact of opportunistic wholesalers; e.g., in the case where a regular wholesaler is reluctant to sell bananas in order to make higher profit by saving bananas nominated for regular retailers rather than provide for irregular retailers when banana demand is high.

If my regular wholesaler treats me that way, I can go to another wholesaler. (Retailer 1)

4.3.4.2 Trust

(i) Defining trust

It is not unusual for dyad partners to have difficulty in providing a direct definition of trust. However, they associate trust with two things; viz., not lying and the absence of conflict. To wholesalers, customers who lie are those who fail to settle their banana installment. According to one retailer, trust is the absence of conflict. It is achieved by being diplomatic

in managing conflict, and the term diplomatic means talking and taking actions carefully in a polite way so as to save the face of the other party.

It means only one thing, not lying"

(Wholesaler 2)

There is trust between me and my regular wholesalers. I don't have any misunderstanding/conflict with them. In the case where my invoice record is different to theirs, they politely ask me 'come here, let us calculate together'

(Retailer 2)

(ii) Forms of trust

Trust is reflected in the way wholesalers and retailers carry out their supply chain activities. Trust comes in various forms such as:

- Allowing postponed payment

Trust shows in the form of allowing retailers to purchase banana with payment postponed until the next transaction. This practice shows that wholesalers trust that retailers will do as they promised. Much of the trust emerges because wholesalers understand retailers are low in capital as one wholesaler mentioned:

I allow them to pay later because I know they lack of capital (Wholesaler 4)

- Letting the other party to keep the debt record

Trusting the partner's integrity and goodwill is also evident when retailers do not keep the record of their installment payment; rather, they expect the wholesaler to do it. As such, customers do not have something to compare with should they doubt the wholesaler's record one day.

I never make any record of my procurement. All I know, for instance, the hand price is Rp. 4,000 and for 500 hands makes 2 million. Only my wholesaler keeps the record of my installment payment, I don't. (Retailer 5)

- Letting the other party initiate price

Letting the other party determine or initiate the price is also an act of trust. By doing that, it means the member trusts that the partner knows better about the market situation because of their many experiences and, therefore, knows the right market price; e.g.,

Sometimes he tells me to name the price because he really trusts me.

(Retailer 1)

- Retailer trusts wholesaler's decision choices

Trust shows in the way retailers let wholesalers choose bananas for them.

If I don't have time, I just tell him on the phone that I want the usual ones like the ones I bought last time and he already knows what I mean.

(Retailer 2)

This shows that trust enables members to use their time more efficiently, though this act of trust is not as simple as it seems. Since there is not an imposed standard, both wholesaler and retailer do not have an exact perspective as to what is good, medium or poor. So what is exactly 'good' to the wholesaler may not seem rather 'good' to the retailer. Thus, by letting the wholesaler select the bananas for him, the retailer is taking a risk of not receiving a product to the best of his satisfaction or needs.

(iii) Development of trust

During the course of a transaction, trust between members fluctuates; it depends on how each person treats their partner, keeps their promises and maintains their performance.

- Fair treatment

Fair treatment is important; as argued by one retailer, "*all should be treated equally*" (Retailer 3). In a sense, despite high variation of banana, wholesalers should distribute bananas at an equal price or mix of product to their regular customers fairly. In response to unfair treatment, a retailer may switch to another wholesaler – probably an irregular wholesaler – although it won't be long before the retailer comes back to the wholesaler who is his regular supplier. Providing an equal and fair service to a number of regular customers is a challenge to wholesalers because the banana supply is inconsistent. Therefore, it is important for the wholesaler to manage carefully the distribution of bananas in a way that does not disappoint customers and which can result in customer's distrust. However, what a retailer considers an occasional unfair treatment does not lead to a deterioration of the relationship.

If I don't mix the bad and good ones, customers who come later will get all the bad ones. I feel pity when I hear their comments "what that customer gets is better than what I get"

(Wholesaler 2)

It's a price issue. For example me and 2 other retailers go to the same wholesaler who then gives a cheap price to one retailer, expensive price to another and a higher price to me. It is often painful because the three of us come together, buy from the same wholesaler together, but we receive different prices while the products are similar. That's sometimes painful.

(Retailer 3)

Being treated like that [my regular wholesaler charges me and other retailers a different price], sometimes I go to other wholesalers only because I am upset.

But I still go back to him because he is basically my regular wholesaler, so no matter what, I surely still go to him. Nevertheless, sometimes he gives me cheaper price than that of other retailers. So yeah, sometimes he does something hurtful but he also does something in favour of me. (Retailer 3)

- Keeping promises

Failure to keep a promise decreases the level of trust. Wholesalers emphasize that the retailers' failure to pay for bananas as promised makes them unable to trust those retailers until they settle their debt payment. On the other side, retailers emphasize the wholesalers' failure to deliver bananas as promised. Usually, retailers trust the wholesaler to select the bananas and send the bananas to them knowing that wholesalers already know their preferences. However, often wholesalers do not keep their promise as they send bananas that were originally set out for one retailer to new retailer, reasoning that the new retailer needs it more. Although the retailer may doubt the wholesalers' excuse, in such a situation the retailer normally can only be patient and accept it believing that the other retailer who ended up having what his share might be is in greater need of bananas; e.g., for a special function.

I call him after waiting for some time inquiring about my banana 'where is the banana that you have allocated for me?' Then he would say 'Oh I'm sorry, there was another customer who is in greater need of banana bla bla bla'. Then I would say 'OK, never mind', that kind of incident automatically disappoints me although I say 'never mind'. This incident is infrequent. It's not because there are other retailers offering my wholesaler a higher price. It's just sometimes there are people who happen to hold functions who look for good bananas which include the ones that have been chosen for me earlier.

(Retailer 2)

- Inconsistent quality of product

A retailer's trust of the wholesaler is substantially influenced by the retailer's performance, which relates to having an extremely inconsistent quality of product. Quality of bananas does vary with every incoming delivery. However, such variation means that the number of good and bad bananas is relatively balanced. Extreme inconsistency is when the majority of

bananas are of bad quality (e.g., small in size). Information along the banana supply chain is fragmented and that means members have limited or no information on what happens beyond their own dyad. Thus, when wholesalers do not perform as usual, it is easy for retailers to doubt the wholesaler's integrity. However, due to the absence of any policy about the issue, generally retailers only verbally rebuke the wholesaler.

If he comes with bad bananas (small ones) and I suspect that he sold the big ones to others. That is (my) distrust. I just tell him 'So the big ones are sold to other while the small ones are left for me, I don't like it'. After that he wouldn't dare doing it again because the following days he brings me the good ones.
(Retailer 7)

4.3.4.3 Commitment

(i) Defining commitment

Generally, dyad members are unable to give a straight definition regarding the word 'commitment'; however, they do relate it to:

- Doing business in the right (halal) way

There is a belief system in the society regarding the use of supernatural power to gain success in business; it is involved in relation to attracting customers. Although this practice is believed to be effective, some people considered it an improper method.

I believe God assigns fortune to people differently; nothing less or more. That is my principle. I mean when we work, we do it halal. As long as it is halal, it doesn't matter if the profit is low, because the blessing is more important. That is my principle since the beginning. So I never follow what people did using the magic.
(Retailer 1)

- Trusting relationship

Commitment means acting on a willingness to trust each other, which leads to a long-term relationship. When a dyad member shows a willingness to trust, he is actually sending a message that he can be trusted. This will make business partner believes that their relationship is worth maintaining for. As such, the dyad member's initiative to trust can be seen as an active commitment while the partner's decision to maintain the relationship as passive commitment.

Trusting each other, because we don't want to do business for just 1 or 2 days, we want it to last for a long time.
(Wholesaler 1)

In business, he [my wholesaler] needs money and I need product so we need to trust each other.
(Retailer 4)

(ii) Forms of commitment

- Helping a partner with financial issues using a verbal promise

Relationship commitment is shown in the way dyad members help their partner with non-business financial issues only based on verbal promise; this action requires trust. It is based on the determination to maintain the relationship and supported by the karma belief.

Trusting each other, because we don't want to do business for just 1 or 2 days, we want it to last for a long time. Others may think of short-term business, but not me. I have many business partners from Sulawesi Island. There was a Sulawesi partner who came here for medical treatment for days in hospital. I took care of him when he was in Intensive Unit Care room for a week, even when he died, I paid all the expenses to fly his body from here to Sulawesi. His son slowly paid me back the money. Others won't do something like that, using their money to cover their partners' needs. But I think of my self, what if I was in such position in great need of help. Now everything is easy for me, but what about my children or my future grandchildren? Who knows other people will help them in the future.
(Wholesaler 2)

- Forgoing short-term gain for the long-term relationship

It is more important to maintain regular buyers than selling banana at a higher price during shortage, which is like short-term profit.
(Wholesaler 2)

- Allowing postponed payment

On the other side, the wholesaler's commitment is shown in the way they trust retailers by allowing postponed payment and, in return for this, wholesalers want retailers to be committed to settle their postponed payment.

I need the product and with the current wholesaler, I can take the product although I haven't got any money because we have become regulars.
(Retailer 4)

- Maintained expertise

Wholesalers understand the high value of product quality to retailers, and that a retailer will keep to the relationship as long as the wholesaler is able to maintain the high quality of product. Thus, to maintain customer commitment to the relationship, wholesalers maintain the quality of their products.

In order to maintain my relationships with regular customers, I maintain the quality of my bananas. Customers will not leave if we have good quality bananas. (Wholesaler 1)

(iii) Development of commitment

- Reciprocity

Relationship commitment can develop out of reciprocity. One retailer mentioned that the reason she is committed to her wholesaler is because the wholesaler is “kind” (Retailer 5).

- Balanced treatment

Although dyad members often feel disappointed in the way their partner treats them, they stay committed to the relationship because the ill treatment they receive is counterbalanced by the good treatment.

Being treated like that (my regular wholesaler charges me and other retailers different price), sometimes I go to other wholesalers only because I am upset.

But I still go back to him because he is basically my regular wholesaler, so no matter what, I surely still go to him. Nevertheless, sometimes he gives me cheaper price than that of other retailers. So yeah, sometimes he does something hurtful but he also does something in favour of me. (Retailer 3)

4.3.4.4 Opportunism

Opportunistic behaviour exists in the dyads in terms of payment and hand counting. A retailer may exhibit opportunistic acts in order to get bananas without paying for them. Such customers promise to pay for bananas they take but do not keep their promise. Such action is referred to as ‘dirty play’ where the customers do not play according to the unspoken rules. There is nothing wholesalers can do in this situation other than leave it in the hand of God.

Many do not pay after for their banana, they run away. Being treated like that, I just be patient, that’s alright. Later in the afterlife we confront them. We will receive more fortune if we are patient. (Wholesaler 4)

Many people can play dirty even when we come to collect the money. If I have asked for the money several times and I get upset, I will just tell them: ‘Are you paying or not? If you don’t want to pay, you will bear the risk’. That’s how I do it. Surely I will incur loss because I already paid my collector; definitely it’s a loss to me. But I believe his fortune is cut to that point. Maybe in the future, I will have more fortune, that’s it. (Wholesaler 1)

On the other side of the dyad, the wholesaler often takes advantage in hand counting; for instance, by writing 65 hands in the shipping record while sending only 60 hands of bananas. Therefore, to avoid being taken advantage of, the retailer usually re-counts the number of hands upon arrival and confirms it immediately with the wholesaler. By doing so, the wholesaler can confirm the retailer's counting version.

The wholesaler takes advantage usually in terms of hand count. Maybe here I have 5 hands but he writes in his notebook 6 hands or the bananas sent out are 60 but there he writes 65 or 70; that is cunning. If he says so, I re-count the number of hands when they arrive here then when I go there I show him.
(Retailer 3)

4.3.5 Performance

In order to know how successful the management of a dyad is to its members, this section provides the perspective of members on their performance in the two years prior to the time interviews were conducted. The performance indicators include financial, cost, quality, operational and comparative performances.

The participants were asked of their performance within the last two years prior in order to see if there is an increase or decrease in their performance from two years back to the day of the interview.

4.3.5.1 Financial performance

Dyad members judge financial performance based on the profit they make. When asked about the profit they made in the previous two years, the members' responses varied. One person said there was no change, two persons experienced a slight increase and one person had a small decrease. In other words, their financial performances did not show any consistent or substantial change. One reason for this, as one retailer mentioned, is the continuous fluctuation of demand.

About bananas, sometimes it's low, sometimes it's back on high again, depends on demand.
(Retailer 4)

4.3.5.2 Cost performance

The cost performance of members, in general, showed an increase in procurement price, and operational costs such as rent and electricity, transportation, and direct labour. Because total costs increased, there was a substantial affect on members' performance.

In the last 2 years, there increase in various component such as kiosk rent and electricity. (Retailer 3)

Labour cost also increases; we didn't have staff 2 years ago. Labour cost increases 70%. (Wholesaler 2)

4.3.5.3 Quality performance

In terms of quality, the dyad performance appears to be in a good state. This can be seen in the zero to very small number of complaints per year and very short lead time. The reason for this is because when their bananas arrive, wholesalers will call retailers on the phone and retailers will come on the same day or the following day after stating their needs.

4.3.5.4 Operational performance

In terms of operational performance, dyad members who experience changes in their productivity are those who experienced a decrease. Productivity decrease is caused by a decrease in the volume of bananas they trade. This can be caused by increased procurement price, a limited supply of banana or a drop in sales.

Sometimes waste outweighs sales. In the past sales were great. Banana was cheap. When I first started a banana business, the price was Rp. 500 then it went up to Rp. 1000. Last year was Rp. 2,000 but no Rp. 4,500. The price goes up because banana in Mamuju (located in another island) was limited, not to mention the cost of truck and ship. (Retailer 5)

Last time over 300 hands of Susu banana wasted. Previously about 500 hands of Muli banana wasted. Sales are quiet now. (Retailer 7)

4.3.5.5 Comparative performance

In regard to competitive performance, members generally find themselves relatively equal in performance to their competitors. Mainly, this is because members were unable to make a clear, straight statement that indicated one of them was better than the other. Besides, in the previous section about competition it was mentioned that they do not feel that they are in a competition. Interestingly, retailers and wholesalers compare themselves with their competitors from different perspectives. One retailer mentioned: “*My competitors earn a higher profit because they sometimes have three cars of banana arrive in one day whereas in my case, it's only once a week if my wholesaler can make it*” (Retailer 7). This implies that retailers compare their performance with their competitors based on the volume of banana they trade alone, not because of differences in marketing strategy. This fact confirms the

concept that members do not apply any marketing strategy, but rather sell their bananas conventionally.

On the other hand, wholesalers use product quality as the basis for competitive performance. One wholesaler mentioned: “*My banana is expensive, theirs are cheaper but their quality is less than mine*” (Wholesaler 2). However, in terms of profit, members believe that their profit is not different to that of their competitors.

4.4 Conclusion

This chapter has described detailed results from the interviews with members of the supply chains; i.e., from how the members select their business partner, manage supply chain activities, respond to an uncertain environment, manage business relationships, and perceive their performance. The description was divided into the three dyads that constitute the banana supply chain. The description allows readers not only to understand the activities in each dyad but also to gain some relative understanding of the supply chain network as a whole.

In the next Chapter, the rich data provided in this chapter will be analyzed before being discussed in reference to the literature provided in Chapter Two.

CHAPTER 5

ANALYSIS OF FINDINGS AND DISCUSSION

5.1 Introduction

In this chapter the analysis of the results and discussion of the findings are presented. The analysis of results begins with summaries of themes for each dyad and the entire supply chain as derived from the interviews. The themes from each of the three dyads are presented followed by those that occur across the supply chain. The subsequent sections comprise discussions of the findings; in these sections, comparisons are provided of the supply chain themes in relation to the literature, the research questions and the hypothetical model. In the penultimate section, a research outcome model from the study is suggested as a demonstration that the body of knowledge in the field has been moved forward. Finally, a chapter conclusion is presented.

5.2 Dyad themes

The analysis of the findings is started by presenting a summary of themes arising from each of the three dyads within the supply chain network; the summaries are based on the findings from the interviews described in Chapter Four. Each analysis is presented in a table format demonstrating that information was based on eight themes; viz., the characteristics of the supply chain members who were research participants, the inter-dependency of dyad members within the network structure, the sources of supply chain uncertainty, the strategies supply chain members develop in response to these uncertainties, the agility in the supply chain, the criteria that participants use to select their preferred partners, the factors affecting the management of business-to-business (B2B) relationships within dyad, and the sources of competitive advantage.

5.2.1 Dyad 1

Dyad One represents the relationships between the farmer and the collector. In this dyad, the term supplier refers to the farmers while the term customer refers to the collector. The themes from this dyad are shown in Table 5.1.

Table 5.1. Summary of Themes – Dyad 1

Categories	Themes
Character of participants	Price sensitive; verbal-based contract; low capital; poor; no employee
Partner selection criteria	Price; payment method; proximity; submissive attitude; honesty; additional support; faithfulness
Dyad inter-dependency (network structure)	Product dependency (collector); financial support dependency (farmer); product perishability (farmer); access to market price information (farmer)
Source Supply chain uncertainty	Varied product quality between and within each dyad; varied product quantity between and within each dyad; external factors (e.g. weather); market competition for both supply & demand; fluctuation of demand; opportunistic behaviour
Uncertainty strategy	Handling variation of supply through flexibility & compromise ; securing supply through advance payment or lending money
Agility in supply chain	No coordination; limited communication. Device; no adjustment to customer needs
Managing B2B relationships	Honesty; additional benefit; diplomatic communication; faithfulness; keeping promise; trust in financial issue; local community value
Sources of competitive advantage	Size of business; having inter-island customers; farmer's performance; number of suppliers; quality of banana planted; number of variety of banana planted; collectors do not neglect me

5.2.2 Dyad 2

Dyad Two represents the relationships between collector and wholesaler. In this dyad, the term supplier refers to the collector and the term customer refers to the wholesaler. The summary of the themes from this dyad are reflected in Table 5.2.

Table 5.2. Summary of Themes – Dyad 2

Categories	Themes
Character of participants	No regulation to adhere to; low capital; family supported business
Partner selection criteria	Payment; quality of product; price
Dyad inter-dependency (network structure)	Collector determines price; cheaper price procurement price; collector allows postponed payment
Source Supply chain uncertainty	Varied quantity, quality, & deliver time resulted from upstream dyad; external factor (e.g. weather) leading to increased waste; opportunistic behaviour
Uncertainty strategy	Mutual toleration & sharing in response to external disruption; price re-negotiation in response to varied quality & quantity of product
Agility in supply chain	No agility drivers or changes; limited infra-structure; no adjustment to wholesaler's need; no information technology system
Managing B2B relationships	Profit; continuous supply; maintained quality of product; keeping promise; submissive attitude; loyalty; providing financial support; honesty; toleration
Sources of competitive advantage	No supply problem; not difficult to find and sell bananas; number of customer; having reliable supplier (to supply whenever needed); fortune; reciprocity

5.2.3 Dyad 3

Dyad Three represents the relationships between the wholesaler and the retailer. In this dyad, the term supplier refers to the wholesaler and the term customer refers to the retailer. The summary of the themes from this dyad are represented in Table 5.3.

Table 5.3. Summary of Themes Dyad 3

Categories	Themes
Character of participants	Self-run business/firm; one to two employees; use family member or relative to run business; lack of capital
Partner selection criteria	Product quality; honesty; understanding; kindness; submissive attitude; reliable payment
Dyad inter-dependency (network structure)	Wholesaler determines price; discounted procurement; price dependency (to retailer); wholesaler allows postponed payment
Source Supply chain uncertainty	Unfixed delivery schedule; increased competition in supply market; increased retailing competition; opportunistic behavior; variation of product quality
Uncertainty strategy	Negotiating price according to demand fluctuation; reducing daily profit to keep retailer (buying from non-regular wholesaler at higher price)
Agility in supply chain	No changes; food trends are not applicable; no information technology system; no coordination
Managing B2B relationships	Exclusive benefit; wholesaler's ability to maintain high quality of product; wholesaler's ability to provide wide variety of product; wholesaler's ability to maintain competitive price; diplomatic or polite conflict settlement; financial support from partner; partner's willingness to forgo short-term profit to keep the relationship
Sources of competitive advantage	Retailers not switching to others; not difficult to find and sell bananas; number of variety of bananas; availability of capital; fortune from God

The three dyads show similarities and differences. In terms characters, participants across dyads seem to be similar. In contrast, in terms of partner selection criteria, product quality does not appear in dyad 1 but only in dyad 2 and 3. Similarly, in terms of price, it only shows in dyad 1. Quality consideration is lacking in dyad 1 because collectors focus more on the quantity of product while farmers only on price. In contrast, since retailers in dyad 3 directly in contact with consumer, quality is crucial. This is why wholesalers in dyad 2 put more emphasize on quality in supplier selection.

In terms of dependency, retailers in dyad 3 and wholesalers in dyad 2 are submissive to their suppliers in regards to price but this is not the case with collector in dyad 1. Collectors' submission is balanced by the perishability of product that makes farmers cannot hold their

bananas for long to wait for much higher price. Meanwhile, in dyad 2 and 3, the need to have consistent supply makes wholesalers and retailers reluctant to bargain the price set by their supplier.

In terms of supply chain uncertainty, the three dyads seem to have similar sources of uncertainty; viz., variation of supply and competition. Nevertheless, dyad members show different strategy to reduce the effect of uncertainties. Dyad 1 focuses more on advance payment or money lending to secure future transaction while dyad 2 on mutual toleration and dyad 3 on having multiple partners to ensure consistent flow of product. Interestingly, price negotiation appears in dyad 2 and 3 but not in dyad 3. The reason for this is money lending or advance payment scheme. Farmers who owe money to collectors generally do not want to bargain the price set by collectors.

The agility in all three dyads is similar where none of the dyads are supported by virtual supply chain. In regards to managing B2B relationships, three dyads seem to share similar themes. However, one distinctive factor, local community value only shows in dyad 1. This is caused by the location of dyads. Transaction between members in dyad 2 and 3 happen in the city whereas dyad in the village where community values are much stronger than in the city. In terms of sources of competitive advantage, suppliers' performance and quality of relationships appear to be the most important factors across the three dyads.

5.3 Supply chain themes

An across-the-supply-chain view can be achieved by combining the themes identified from the three dyads. The combination can be presented in a number of ways; (a) include themes identified in all three dyads, or (b) include themes that appear in responses related only to one or two dyads. Although some themes appear only in one or two of the dyads, they may prove to be important in relation to extant literature identified in Chapter Two, the research questions of the study identified in Chapter One or the Hypothetical Model in Chapter Two. Similarly, a decision needs to be made eventually as to the themes to be included in the Research Outcomes Model (Chapter 5) as an overall summary of the outcomes of the study; thus, Table 5.4 presents the summary outcomes. In this table, every dyad is viewed as a supplier-customer relationship in which the term 'supplier' applies to the party who supplies bananas and the term 'customer' applies to the party who receives bananas.

Table 5.4. Themes Across the Supply Chain

Categories	Themes
Character of participants	Price sensitive; verbal-based contract; low capital; poor; limited to none employee; no regulation to adhere to; family supported business; self-run business
Partner selection criteria	Price; payment method; proximity; submissive attitude; honesty; additional support; faithfulness; quality of product; kindness; reliable payment
Dyad inter-dependency (network structure)	Customer's need of product; supplier's need of financial support; product perishability; knowledge of market information; determination of price by supplier; discounted price for regular customers; postponed payment for regular customers
Source Supply chain uncertainty	Product quality; varied product quantity; varied delivery time; upstream variation; external factor (e.g. weather); increased market competition for both supply & demand; fluctuation of demand; opportunistic behaviour
Uncertainty strategy	Flexibility & compromise; price negotiation; advance payment or lending money; mutual toleration & haring loss; negotiation price according to demand fluctuation; respond to competition by reducing daily profit to keep customer
Agility in supply chain	No coordination; limited comm. Device; no adjustment to customer needs; there is no changes (agility drivers); limited infra-structure; no information technology system; food trends are not applicable
Managing B2B relationships	Honesty; additional benefit; financial support; diplomatic comm.to settle conflict; faithfulness; loyalty; keeping promise; trust; profit; continuous supply; maintained quality product; maintained wide variety of product; competitive price; keeping promise; submissive attitude; toleration; willingness to forgo short-term profit; local community value
Sources of competitive advantage	Size of business; composition of customers; supplier's performance; number of suppliers; quality of banana product; number of variety of product; having faithful customers; smooth supply; no difficulty in finding and selling product; availability or access to capital; fortune from God

5.4 Themes compared with the literature

Having identified the dyadic and supply chain themes, a discussion of the meaning derived from the findings starts with the comparison of the supply chain themes with the literature presented in Chapter Two; with the focus on the informal economy, uncertainty, supply

chain agility, network structure and power relationship, and relationship marketing management, as follow.

5.4.1 Informal economy

The characteristics of participants, e.g. working in a self-run business, the absence of regulation to adhere to, low in capital and only a verbal-based contract, all of which make market and business relationships unstable, indicates that banana supply chain members work in an informal economy (Hart, 1973). The only characteristic not mentioned by Hart (1973) which can add to the existing features of business in the informal economy, is that of price sensitiveness. Participants in the informal economy are operating with a small capital and trading product of little or no added value; the consequence is that they have a marginal money flow. Thus, price may impact substantially on their revenue/income, which then makes them sensitive to price.

The ability of participants to make quick decisions to change the variety of banana they plant in response to plant disease mirrors the report of Horn (2011) in which it was found that participants in the informal economy could modify their products relatively fast in response to a financial crisis. The flexibility of farmers to change the variety of their bananas to their circumstances coupled with participants' flexibility to switch their position in the network (as shown in Dyad 1 where a farmer becomes a casual agent for the collector in an attempt to supplement the source of income) confirms that participants in this informal economy are agile.

5.4.2 Uncertainty

Uncertainty is inherent either in the internal or external factors of the supply chain. Gaur, Mukherjee, Gaur and Schmid (2011) and Milliken (1987) define uncertainty as a condition in which probability of future events is unpredicted. Uncertainty leads to risk, as mentioned by Sheffi and Rice Jr. (2005); i.e., risk depends on uncertainty because uncertainty is the primary source of risk that every firm faces. Thus, the greater the probable variation of actual loss leads to a greater degree of uncertainty and, therefore, the greater the degree of risks (Willet, 1951).

Risk mitigation is a strategy used to cope with uncertainty and assist in reducing the impact of uncertainty. The inherent uncertainties from internal and external factors in the network environment potentially lead to supply and demand disruptions to which the supply chains are required to be flexible in addressing such uncertainties. Sawhney (2006) proposes three

dimensions of flexibility to address supply uncertainty; inputs, process and outputs. Liu et al. (2010) suggest a dual sourcing strategy which is defined as supplementing a supplier with another more reliable supplier by adding another supplier while Thun, Druke, & Hoening (2011) and Yang & Yang (2010) observed strategies such as postponement of activities, buffering stock and developing lean production to respond to demand uncertainty. Research participants revealed the view that risk management in the supply chain network requires collaborative and close relationships between members of dyads to facilitate smooth flow of information and coordination across the supply chain network (Chandra & Kumar, 2001; Manuj & Mentzer, 2008). Similarly, they argued that such relationships require trust (Fawcett, Jones, & Fawcett, 2012; Klein & Rai, 2009). Ideally, participants agreed that these strategies are able to minimize uncertainty.

The above proposition is not fully true with this study; uncertainty in this study stems from the supply rather than the demand side. Demand does fluctuate but the fluctuation can be predicted. What participants regard as uncertainty is the unstable outcome and unpredicted loss which can result from unstable or unpredicted supply. Participants' actions are directed towards reducing this instability; this is done by trying to secure both supply and demand. The strategies that participants implement are lending money, flexible payment and advanced payment to maintain/nurture their B2B relationships. However, these actions also entail risks. By doing so, the current research participants take the risk that their partner will use the opportunity for self-gain without returning the favour. Thus, by using mitigating strategies, the research participants actually exposed themselves to another form of risk, rather than reducing the overall risk. As such, these strategies may be described more aptly as marketing strategies than risk mitigation. Through these strategies, participants are actually promoting themselves or making them attractive/beneficial to the suppliers or customers and, thereby, they are able to secure the markets more continually. By securing both supply and demand, the participants are not only maintaining, but also creating, markets for themselves. This explanation shows that what is seemed as merely action (e.g. lending money to business partners out of sympathy) is in fact, a strategy. Thus, in the context of this study the terms 'action' and 'strategy' are used interchangeably.

5.4.3 Supply chain agility

The study of agility has increased due to the realization that the business environment is dynamic, in the sense that it constantly changes as new technologies or products are introduced; the consequence is that, to be agile, supply chains must be innovative in adapting to the changes in the business environment (Javalgi, Gross, Joseph, & Granot, 2011; Mol &

Birkinshaw, 2009). However, the drivers of agility, including current food trends, are not particularly evident in this study. The major change that participants notice is that of increased competition due to the increased number of players trading in similar products. Avella and Fernandez (2007) refer to competition as a hostile driver of agility. However, in this study, participants regard competition not in a sense of innovation of products or process but rather, competition for obtaining a reliable supply of good quality bananas.

It has been argued that the agility of a supply chain in response to changes is underpinned by an information technology system across the supply chain network to facilitate the quick flow of information and network coordination (Goldman, Nagel, & Preiss, 1995; Naylor, Naim, & Berry, 1999; Roberts & Grover, 2012); as such, chain members can align their operations or activities so as to build competitive advantage.

In the current research, alignment tended to occur only at each dyad level in the form of logistic coordination which is done in relative isolation of what happens in other dyads. Thus, in the current study of the banana industry, supply chains appear to be disconnected or fragmented due to the lack of coordination across dyads and the available information technology system. However, supply chain members show a sign of individual agility in the way they can tolerate, and be flexible to, the unpredictable market. As such, there is an alignment of attitude across the supply chain network which members use to enhance the agility of the supply chain.

According to the literature, the agility of a supply chain is often related to the members' ability to innovate or to be better than others by capturing and taking advantage of the opportunities; i.e., by relying on speed, flexibility and responsiveness to make a profit out of the opportunities and, thereby, create competitive advantage (Gunasekaran, Lai, & Cheng, 2008). In contrast, in this study, the opportunities are limited by other chain members; e.g., the inability of customers (collector, wholesaler, and retailer) to pay straightaway or the inability of suppliers to control variation (farmer, collector, and wholesaler). Thus, in this context, the nature of agility is to use these opportunities (e.g., by allowing postponed payment, lending money or tolerating problems) to make a long-lasting committed relationship because that is the key success factor.

Unstable activities in the banana supply chain simply reflect the general instability of business that can be seen in an informal economy (Hart, 1973). Thus, supply chain

management in this context should aim to reduce the impact of this instability through flexibility, which suggests that the principle or theory of supply chain agility remains applicable to the context of the informal economy, but it must be seen from a different perspective; that is, the capability to be flexible in accommodating the needs as well as weakness of business partners in order to reduce the undesirable impact of market uncertainties.

5.4.4 Network structure and power relationship

According to Yamagishi, Gilmore & Cook (1988), distribution of power is influenced by network position, distance from source and control of resources. In this study, across the dyads, the main resource is the product itself and the constancy of product availability substantially impacts on the competitiveness of a business. As such, suppliers (wholesaler and retailer) are generally more dominant as shown in Dyad 2 and Dyad 3. However, this not the case with Dyad 1 in which the customers (collectors) determine the price while suppliers (farmers) are the ones who hold the resources. Therefore, it cannot be said that control of resources or distance from resources influences an equal distribution of power. The main reason for this is the perishability of the product. Although suppliers as producers hold the resources, they cannot hold the product for long because the longer they keep the product, the more it reduces in value. Therefore, suppliers are generally submissive to the customer's price nominations.

Distribution of power is due mainly to the combination of product characteristics (perishability) and inter-dependency of players in each dyad. In the third dyad (wholesaler-retailer), retailers (customers) are generally submissive to wholesalers (suppliers) because retailers rely heavily on discounted/reduced prices and postponed payment, due to their low capital. Meanwhile, in the second dyad (collector-wholesaler), wholesalers (customers) are generally submissive to collectors because they rely on collectors for providing the product. In the first dyad (farmer-collector), collectors (customers) rely heavily on farmers (suppliers) for growing the product while some suppliers rely on customers for financial support since suppliers are low in capital. However, for suppliers who do not rely on customers for financial support, there is a greater degree of independence. Nevertheless, in other farmer-collector dyads, there are farmers who do not need financial support from collectors but they are dependent on collectors to take their products because they cannot hold the bananas for too long due to their high perishability. This confirms the seminal work of Emerson (1962, 1972) who stated that the power of one party over another is an inverse function of the party's dependence on the other party.

The inter-dependency of dyad members and between dyads across the supply chain influences the level of flexibility in the supply chain network. A network is considered dynamic in the sense that it changes constantly as network members develop or break relationships. However, the flexibility and dynamics of the supply chain in this study are driven by the weak ties between network members; i.e., weak ties caused largely by the lack of formal contracts. The business relationships in the banana supply chain may be considered only somewhat flexible, not because they are based on a formal contract but, rather, on verbal promises. The dynamic of network in this study does not reflect the mainstream of network dynamic in the literature (Halinen, Salmi, & Havila, 1999; Halinen, Törnroos, & Elo, 2013) since the participants who carry out relatively simple and stable activities do not change or modify their systems to adjust to their partners. Therefore, the network dynamic in this study should be viewed in its context. Thus, this finding brings different understanding to the concept of what constitutes a dynamic network.

Participants appear to sustain a sense of inflexibility by maintaining their commitment to the dyadic relationships and, thus, stabilize the dynamics across the supply chain/network. But at the same time as they lock themselves into the relationships, they reduce their opportunity to gain more profit by means of taking advantage of demand fluctuations through changing partners continuously. Ironically, profit is what makes participants across the dyads choose their preferred partner. Also, profit is what participants use as the indicator of performance. This paradox reflects the fourth network paradox in the literature of network dynamics proposed by Fretay and Ritter (2005) about stability and change.

By making use of data in this study, the paradox can be explained. Supply chain members are operating with quite a low capital and that makes them sensitive to cost factors. It also explains why profit is important to them. Thus, they continuously calculate about cost and profit associated with relationship changes. Though they seem to be inflexible, committed relationships mean average profit in the long term and less cost in the short term. Meanwhile, uncommitted relationships, though they may suggest more flexibility, usually mean higher profit in the short term and higher cost in the long term. Furthermore, by choosing to be committed to the relationships, participants do not only restrict their ability to change partners, they also become interdependent and in such relationships where business contract is absent, participants cannot control or dictate to their partners or the relationships will

cease. As such, it reflects the three-network paradox proposed by Håkansson and Ford (2002).

The fact that the traditional banana supply chains are informal networks coupled with the high perishability of product as the main resources in the supply chain, influence the dependency of a member and thus, the power structure in each dyad. This dependency allows chain members to be agile or flexible with payment, delivery schedule, or partners' demands. In other words, chain member can accommodate the needs and weakness of their business partners because they do not want to lose the relationships. On the other hand, the informality of network also allows supply chain member to be agile in a sense that the member can freely change business partners anytime. Although this is an option, it is not a preferred strategy as it prevents the chain members to develop a long-lasting committed relationship.

5.4.5 Relationship marketing management

In the business-to-business (B2B) relationships of supply chain members in this study, personal traits such as honesty, loyalty, trustworthiness (manifested in keeping promises) and patience (manifested in a submissive attitude) are important to support the relationships. These characteristics allow participants to implement their marketing strategy, to secure supply and demand by lending money or allowing postponed payment. These marketing strategies are important to support long-term relationships which eventually bring a positive impact to the participants' competitiveness in the market. This is consistent with the view of El Ansary (2005) who noted that relationship marketing management is the managing of relationships among partners in order to implement marketing strategies, and that the outcomes of relationship management are primarily satisfaction, retention and loyalty.

Relationships are underpinned also by the performance of suppliers; viz., the supplier's ability to maintain a high quality product, a wide variety of product, a competitive price and a continuity of supply. These factors impact directly on satisfaction, which then leads to relationship commitment. This finding is in contrast with the studies of Johnson et al. (2008) and Payan & Svensson (2007) who argue that trust and commitment are antecedents of satisfaction, but in line with Hennig-Thurau, Gwinner, & Gremler (2002) and Moliner, Sánchez, Rodríguez, & Callarisa, 2007 who stated that satisfaction is the antecedent of trust and commitment.

5.4.5.1 Trust and commitment

The role of trust and commitment are important in managing B2B relationships. In this study, trust is beyond believing that others will do as they promised (Bejou, Ennew, & Palmer, 1998; Caesar & Rigdon, 2011; Morgan & Hunt, 1994), but it reaches the point where one lets the other decide for both or giving way to the other which is evident in price determination, recording postponed payment history or hand counting. Bargaining with, or questioning a partner's decision is seen as showing a lack of trust. That is why dyad members counter-balance what they perceive as an unfair decision by their partners in a diplomatic or subtle way at another occasion so as to avoid open confrontation. Open confrontation may make the other party lose face or get offended. What is more, since there is no formal contract between members, it is important for them to not let the other party become offended as that may be a basis that reduces the partner's commitment to the relationship.

Maintaining a partner's commitment is crucial for dyad members. It allows for continuation of a sustainable market when times get rough. Commitment involves a willingness to share losses or forego short-term benefits, particularly in bad times; for customers (collectors, wholesalers and retailers) it is when the market demand for banana decreases and for suppliers (farmers, collectors and wholesalers) it is when banana is plentiful in the high season. Such loss is counter-balanced in the opposite situation for both customer and supplier. This reflects the behavioural component of commitment, particularly the calculative aspect (Fullerton, 2003; Morgan & Hunt, 2004; Williamson, 1983).

Norms also support the members' commitment to the relationship. The role of norms is quite strong; e.g., despite a partner's shortcomings, a dyad member does not switch to another customer. The role of norms is stronger in Dyad 1 (farmer-collector) than in the other two dyads. Possibly, this may be due to the fact that the influence of social norms or values is stronger in the villages than in the cities. This is in line with the Singgih and Woods (2003) finding, though there is a slight difference between their findings and those in this study. In the Singgih and Woods (2003) study, they found that it is the social stratification in the village that makes farmers reluctant to bargain with the customers (wholesalers) who are considered high in status, whereas in this study, farmers are reluctant to switch customer (collector) fearing that such action may disturb their peaceful social relations. The crux in this study is that, in the villages, business relationships are perceived as social relationships in nature where the attitude towards business partners is influenced also by the perceived social status of the partner.

In the interview report and data analysis, it was evident that commitment is developed and maintained through trust. A partner's commitment is shown in the loyalty to stay together in good and bad times and a willingness to forgo short-term profit. When a partner has demonstrated that they are trustworthy, in return dyad members trust that partner and use that trust as the basis to commit to and maintain the relationship. The first kind of commitment is active while the latter is passive. Active commitment is based on the calculation that dealing with a regular partner in both high and low seasons is better than selling bananas to non-regular customers for a slightly higher price and losing regular customers in the low season. Meanwhile, passive commitment is based on a partner's behaviour; in other words, if the partner is loyal, the actor will be loyal. In a way, this represents reciprocity and benevolence. Participants whose commitment is more of the passive type are those who are more dominant or those who are less dominant but satisfied as long as they can make any profit out of the transactions. Early study on commitment focussed on the process of conformism and concluded that the processes of commitment were compliance, consent, conformance and convergence (Jahoda, 1956). Allen and Meyer (1990) suggested three categories of commitment; viz., calculative, affective and normative. Another perspective of the components of commitment presented it as attitude and its related behaviours (Morgan & Hunt, 1994; Mowday & Steers, 1979; O'Reilly & Chatman, 1986). The commitment of participants in this study consists of several inter-related components suggested in the literature such as calculative, affective, normative, and attitudinal. In terms of process, the development of commitment of some participants fits the compliance aspect while others fit the conformance aspects (Jahoda, 1956). Therefore, to generalise and categorise the development of commitment in this study, based on the responses of the participants, the classification of active and passive commitment fits well.

5.5 Themes compared with the research questions

The discussion of the findings as compared with the extant literature (in Chapter 2) provides a basis from which to examine the research questions that underpinned the current study. There are six research questions that were presented in Chapter One. Each of the research questions is discussed separately, below:

Research Question 1: How do members in the supply chain perceive uncertainty?

For the members of banana supply chains, the term 'uncertainty' refers to industry conditions that are unpredictable; e.g., variation of product supply, interrupted delivery, the behaviour of partners and external factors such as weather. The term implies factors over

which members have little or no control. This understanding resembles definitions in the literature which indicate that uncertainty is a condition in which the probability of future events is unpredictable (Gaur et al., 2011; Milliken, 1987).

In the current study, uncertainty exists in a cyclical process whereby one kind of unpredictability leads to another kind of unpredictability. For instance, uncertainty of quality and quantity in an incoming batch of bananas leads to uncertainty of purchasing price which leads to uncertainty of sales. This reflects the findings in the Sheffi and Rice Jr. (2005) study where they indicated that conventional disruption such as supply variability can cause demand uncertainty. However, the difference between their study and this study is in the frequency of the supply variability. Sheffi and Rice Jr. (2005) refer to supply variability as a disruption which implies 'rareness' of an event, whereas in this study the supply variability inevitably is a continual one. This emphasizes the intensive nature of uncertainty in the banana supply chain. Since supply variability is continual, as is price and demand, uncertainty has become the somewhat 'normal' state of affairs; i.e., variable price and demand are normal in the banana industry..

Research Question 2: What factors lead to uncertainty in the banana supply chain?

Four main sources of uncertainty were identified in the current study. The first one stems from the variation of supply of product in terms of quantity, quality and delivery time. These variations are caused by the lack of sorting and grading, particularly in upstream dyads. The second source is the competition in both supply and demand markets, caused mainly by the increased number of banana traders; this makes it more difficult for existing banana traders to gain and sell bananas. The third source of uncertainty is relationship uncertainty which stems from the absence of a legal contract to bind the relationships. B2B relationships in this study are marked by a partner's potential opportunistic behaviour which could cause financial, business and social loss. This source of uncertainty has been identified in previous studies (Das & Teng, 2001; Liu et al., 2008; Ring & Ven, 1994).

However, there is a major difference between previous studies and this study in terms of the degree of uncertainty which stems from the overall business context. The previous studies discuss relational uncertainty based on members' behaviour alone; i.e., without including the context. In this study, it is the context that triggers relational uncertainty. Banana supply chains in this study are part of the informal economy. Business-to-business (B2B) relationships between members in the supply chains are not formalized in legal documents and transactions are not formally done in a way that allows a dyad/network member to

legally sue a business partner who fails to do his tasks as agreed. Thus, members are actually undertaking 'illegal' or 'informal' transactions. Without a formal B2B relationship, members are in constant uncertainty in regard to the stability of their relationship and their partner's performance. Business contracts are used to regularize business transactions; e.g., details of transactions such as time of delivery, quantity of each delivery and quality of products to be delivered (Kamrad & Siddique, 2004; Li et al., 2009). In the absence of such a contract, although a delivery schedule may be stable, a member still faces constant uncertainty regarding the quality and quantity of product in each delivery from a supplier. Informal business transactions and B2B relationships characterize business activities in informal economies and differentiate them from formal economies. According to Horn (2011), informal workers, mainly, are self-employed persons who at any time can alter the price of their product, shift their business location, change their product or modify their product line. The nature of such informal workers is similar to that of supply chain members in this study.

Therefore, it can be suggested that, in general, business relationships in the informal economy may be less regulated than those in the formal economy. Thus, it can be argued that in the context of formal relationships, the term 'relational risk' suffices because they have a contract that poses as a mechanism to reduce uncertainty; meanwhile, in the context of informal relationships, the term 'relational uncertainty' fits better because of the lack of such a mechanism. Similarly, in the nature of B2B, the concepts of 'dynamic' and 'flexible' in the banana supply chain network need to be carefully and clearly understood. The B2B is dynamic in a sense that supply chain member may transact with different partner or at anytime; e.g., a supplier may choose not to sell bananas to a certain regular buyer temporarily or a buyer may choose to stop buying from a supplier for some reason. Meanwhile, flexibility in the B2B reflects in the way supply chain members accommodate their partner's limitations; e.g., a buyer can tolerate variation of supply from a supplier or supplier can tolerate postponed payment by a buyer.

Fourthly, the last source of uncertainty is that of external factors, such as weather, which can cause production and transportation disruptions. The current findings support the view that weather greatly influences the uncertainty within food supply chains as described by Hardaker, Huirne, Anderson, & Lien (2004) and Meijerink & Roza (2007).

In addition to that, participants also sense a great uncertainty along with opportunity of upgrading business activities which involve collaboration with members from modern

supply chains. A collector and a wholesaler among the research participants turned down such opportunity because they did not want to take the risk of trading in Cavendish bananas – currently sold exclusively through modern supply chain – in addition to the local variety or conversion from traditional to modern operations (e.g. installing washing equipment, abiding with strict-standard products, dealing with formal companies). The comforts that the participants enjoyed with their current situation kept them from taking the risk to change. As such, the participants were risk averse.

Out of these four sources of uncertainty, variation of supply and instability of B2B relationship are the two factors that supply chain member can change in order to minimize the undesirable impact of uncertainty. One feasible recommendation is by having the engaging parties to sign a written contract that states the responsibilities of each party. Such contract can regulate the variety, volume, and delivery time of bananas delivered and purchased. It can also regulate how both parties find the solution should banana production is disrupted by external factors. In addition, the contract can manage termination of relationships or what happen if one party wishes to discontinue the relationships. With this, the engaging parties can prevent themselves from adversarial treatment from their partners even in the situation where competition is high.

Research Question 3: What strategies do members develop to cope with uncertainty?

In response to supply variation it appears that, basically, customers (collector, wholesaler and retailer) cannot do much more than accept it. However, there is a mechanism developed in dyads by the customer and supplier as compensation; e.g., through price negotiation where two banana hands of poor quality are priced as one hand of good quality banana hand. In response to supply competition, participants usually try to secure future supply by paying in advance. It may seem that the customers (collector and wholesaler) are lending money because the sum of money the customers give to the suppliers does not reflect the exact volume of future shipping, since the quantity and quality of banana delivered are unpredictable.

In response to demand competition, suppliers (farmer, collector and wholesaler) usually accept a competitive price in accordance with fluctuations in demand; at times, this may mean a reduced profit for customers (collector, wholesaler and retailer). However, such a strategy is effective in preventing regular customers from switching to another supplier. In response to supply disruption as a result of external factors, instead of letting one member

bear all the loss, dyad participants usually share the loss. Loss sharing also appears in the way supplier and customer settle differences that can occur in the banana hand counting process. The difference is usually equally divided between supplier and customer. Similarly, a study on supply chain on perishable products by Cai, Chen, Xiao, Xu and Yu (2013) found that loss sharing through market clearance and price discount sharing contracts allows a producer and the distributor to share the risks involved in the transportation and selling process.

Supply chain members tend to apply individual yet similar strategies to cope with uncertainty. This poses an opportunity to establish an association, such as farmer association or farmer group to manage banana distribution in a village. The association accepts all bananas from farmers and sell them to collectors at competitive price. The association can also give loan to farmers that farmers can pay back with bananas. With terms and conditions that bound both farmers and collectors, such association can effectively reduce uncertainty in upstream.

Research Question 4: How do members develop or gain necessary resources to develop these strategies?

The characteristics of participants and simplicity of supply chain activities suggest that, in the current research findings, there are no resources such as knowledge, information system, improved infrastructures or equipment/machines that are specifically used in supporting participants' strategies. Money that is used in providing financial support or advanced payment is the main source of support resource used by participants. In Dyad 1, money is also used by some customers (collector) to provide incentives to suppliers (farmers) who are willing to search for, and buy, bananas from other farmers and bring them to the collector.

On the other side of the dyad, suppliers (farmers) who are lacking in resources including money, offer additional service to their customers (collectors). This additional service is shown in the way farmers deliberately go out to buy bananas from other farmers and bring the bananas to the wholesaler. As such, these farmers are not only marketing the product but their services as well (El Ansary 2005; Hart 1973). Providing additional service improves the supplier's importance to a buyer particularly when the product involved is less, or no added value, and the B2B relationship is informal.

Research Question 5: How do members manage their business-to-business relationships?

B2B relationships of participants are both informal and personal in nature. The role of personal traits such as kindness, honesty, loyalty, trustworthiness and patience are important since banana supply chains operate in an uncertain environment. In previous sections, the four sources of uncertainty and the strategies developed by participants in response to these uncertainties have been discussed. The B2B relationships of participants are managed by integrating their personal traits into their business activities; e.g., honest hand counting, patience to endure a partner's shortcomings, being faithful in good and bad times, trust in lending money for personal purposes or allowing postponed payment, kind enough to be concerned with a partner's poor condition, and being trustworthy by paying debt or not taking advantage of a partner even if an opportunity arises. The combined personal and business traits approach is evident in the way participants select their business partners. Apart from price, personal characteristics are what participants use as the basis for selecting their preferred business partners.

Besides personal traits, socio-cultural norms and religious beliefs also influence the way supply chain member manage their B2B relationships. The commitment of members to their current relationships, despite a partner's shortcomings, is preserved by the members' strong hold of the socio-cultural norms and concern to maintain a good image in the community. Generally, this applies to supply chain members who live in the villages. Religious beliefs influence transactions between members of the supply chains. These show in the way participants refrain from taking advantage over their partners or being patient over their partner's shortcomings for fear that God will punish or reward people double accordingly. This is in line with normative aspect of commitment in the literature of relationship marketing management (Allen and Meyer, 1990).

Research Question 6: How does relationship management allow members to build competitive advantage?

The competitive advantage in the traditional banana supply chain is associated with stability or consistency of product flow in terms of quality and quantity, particularly when the market becomes more competitive. Stability of supply leads to stability of sales and, thus, maintains customer relationships; as one participant said "*once I fail to supply banana to any of my regular customers, they might switch to other wholesalers*" (Wholesaler 3). This stability is the value that supply chain members give to their customer. Stability of sales means higher profit over time; profit with which participants can expand their business. This perspective of

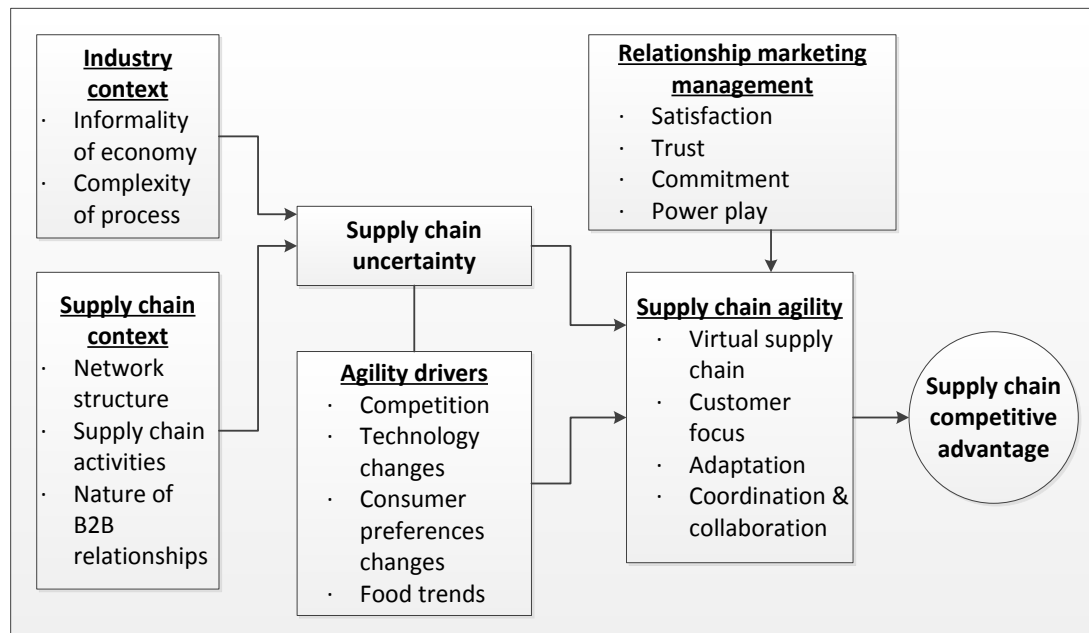
competitive advantage arising from this study is different to the mainstream understanding which often measured by market share (Vazquez-Bustelo, Avella, & Fernandez, 2007), firm size and firm performance (Mol & Birkinshaw, 2009; Roberts & Grover, 2012), or market growth and differentiation advantage (Li & Zhou, 2010). This shows that competitive advantage can have a different understanding in different contexts. Thus, the understanding of competitive advantage used in this study is what developed through the perspective of the participants and, therefore, should be viewed within the context.

People with personal traits as mentioned above are deemed to be reliable partners. Doing business with these people allows participants to reduce the impact of high competition in both the supply and demand markets. In other words, although the banana industry situations are quite uncertain due to competition, participants do not have difficulty in finding and selling bananas because they have reliable suppliers and customers. As one participant said: *“I don’t think about it (competition) that much. It depends on my supplier’s performance. When we have many suppliers, we are safe”* (Collector 1). This reliability includes the capability to maintain supply availability, to give competitive price, and to share loss in both good and bad times in the absence of contract which signifies committed actions. This is in line with a previous study by Gharebашlani and Seify (2014) who found that relationship marketing variables such as commitment, conflict management, and communication strongly positively affect the competitive advantage of a firm.

5.6 Themes compared with the hypothetical model

Despite the broad approach to the current literature (Chapter 2) in relation to the current research questions (Chapter 1), it is apparent that parts of the findings fit the hypothetical model (Figure 2.2) that was established in Chapter 2, whereas others do not. To discuss this, the hypothetical model is re-presented, followed by a discussion that focuses on what the findings mean with regard to the original hypothetical model.

Figure 5.1. Hypothetical Research Model



5.6.1 Findings that fit the model

- 1) Supply chain uncertainty is influenced by the informality of the economy. In an informal setting, chain members are free to come and go. They can at any time reduce the size of their business, modify their banana business or even leave the industry. Consequently, this may lead to unstable supply chain network.
- 2) The nature of B2B relationships is a major aspect of the supply chain context. Since the chain members are free to join or leave a supply chain network, it is important for all chain members to satisfy the needs of their partners as to maintain the relationships.
- 3) The informal economy in which the supply chains operate shapes the nature of B2B relationships in the banana industry. In the absent of written or legal contract, the B2B relationships are basically informal relationships. Thus, managing these kind of relationships is highly important in traditional banana supply chains.
- 4) In the same way that B2B relationships are informal, they can be influenced by the uncertain and unpredictable aspects of the banana industry. This can be seen in the way external factor such as weather may influence transaction between supply chain members. In the case where bad weather decreases production or causes late delivery that result in loss, supply chain members are called to response in an

appropriate manner, for instance, through toleration or sharing loss. The inability of chain members to tolerate or share loss may result in relationship termination.

5.6.2 Findings that do not fit with the model

- 1) Supply chain uncertainty is not influenced by the complexity of process, network structure or supply chain activities because the network is somewhat disconnected and fragmented; in effect, the supply chain processes are not complex.
- 2) Competition is one of the sources of uncertainty and, paradoxically, it is also a driver to build competitive advantage. Competition is not a driver of supply chain agility. Competition is caused by the increasing numbers of traders that makes supply chain members have to compete for supply and demand. In informal setting, such situation makes supply chain members unable to predict the volume of supply and sales they make and thus, create uncertainty for them. Therefore, in response to this, supply chain members try to develop committed relationships with their existing partners since having committed and faithful partners enables chain members to stay competitive.
- 3) The role of relationship marketing management is important; not in the sense of supporting supply chain agility but in securing and preserving the supply and demand for supply chain members. Traditional banana supply chains are not supported by virtual chain. Customer focus, adaptation, and coordination also do not show in dyads studied. Thus, supply chain members manage their relationships to accommodate the needs and weakness of their partners through schemes such as advance payment and postponed payment in order to maintain their relationships. In that way, the chain members are able to secure and preserve supply and demand for them.
- 4) Supply chain competitive advantage is not achieved primarily through supply chain agility but, rather, through the management of relationship marketing; i.e., the management of B2B relationships that lead to successful marketing in response to levels of uncertainty and competition in both the supply and demand markets. The informality of setting and simple supply chain activities carried by the dyad members that shape the traditional banana supply chains puts relationship management a priority in successful marketing since supply chain members view it as an important factor in their competitiveness.

5.7 Research outcome model

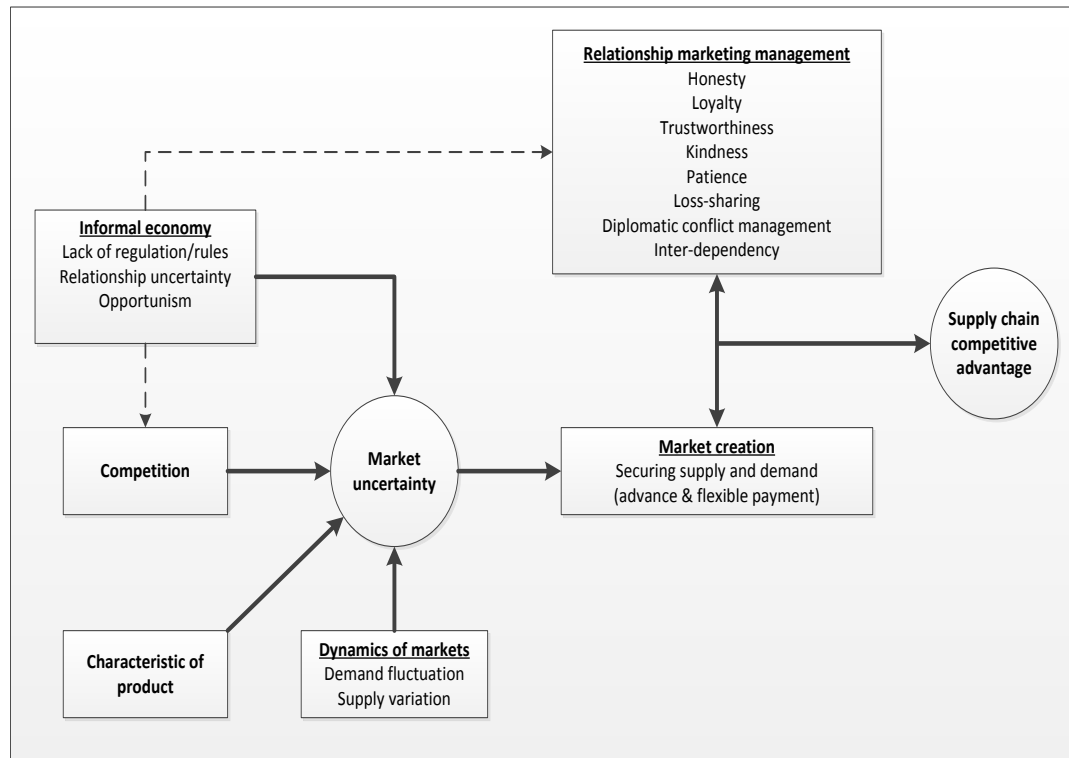
As noted previously, the uncertainty in banana supply chains stems from four sources; viz., the informality of the economy, the level of competition, the dynamics of the markets and the characteristics of the product. These four factors continue to make markets uncertain for all supply chain members. Thus, the uncertainty forces supply chain members to ensure they have a sustainable supply of product and a fast flow of product to the market in the midst of high competition in both the supply and demand markets; supply chain members need to secure supply and demand in order to gain and maintain competitive advantage. However, the success of the strategy relies heavily on the management of B2B relationships. The main reason for this is simple; results from the study have emphasised that the conventional supply chain management in the banana industry is marked by a lack of resources and infrastructure.

Thus, at the dyad level and across the banana supply chain, the key factor for success is seen as being identified in the relationships developed between members. Relationship marketing management and marketing strategies are like a good-natured cycle. Managing of relationships positively influences the success of marketing strategies; on the other hand, the implementation of the strategies, which are risky in nature due to the absence of a contract, strengthens the relationships.

Overall, the informality of the economy raises the importance of relationship management. Aside from that, informality of the economy marked by the absence of policy-regulated entry to the industry and the lack of operational regulations may trigger an increase in the number of traders which, in turn, increases the competition. While regulation is unfeasible, preserving committed relationships improves the ability compete.

The outcome of the current study has been summarised in Figure 5.2. The research outcomes model (R.O.M.) is an advance on the original hypothetical model derived from extant literature and provides a general overview of the answers derived from the data in answering the current research study questions.

Figure 5.2. Research Outcome Model – R.O.M.



5.8 Conclusion

In this chapter, analysis of the data has been described through the process of thematic analysis. The research findings have been discussed in reference to the search of extant literature and the original hypothetical model presented in Chapter 2. A distinction has been made between research findings that fit with or do not fit with that hypothetical model. Answers to the six research questions underlying the study have been presented. Finally, a research outcomes model (R.O.M.) was created to suggest how the outcomes of the current study have advanced knowledge about the operation of supply chains; specifically in relation to the banana industry in Indonesia.

In the next chapter, Chapter 6 - Conclusion, the implication of the findings will be presented and some suggestions made regarding possible future research in the field.

CHAPTER 6

CONCLUSION

6.1 Introduction

In this chapter the conclusion of the study is presented. An overview of content from Chapter 1 to Chapter 5 is presented, followed by comments on the limitations of the study. In the following two sections, the major research findings and the implications of findings are reviewed. In the sixth part of the chapter, the contribution of the study to both theory and practice is discussed. The value of the developed research outcome model (R.O.M.) is outlined and a statement made to confirm that the body of knowledge in the supply chain and banana industry has been enhanced as a result of the study. Finally, the study is completed by illustrating some potential future research directions as a precursor to an overall conclusion to the thesis.

6.2 Collation of content

Chapter 1

In Chapter 1, the changes in research objectives underlying the study have been described; a major reason for the change arose from the limitations of oral and written language of potential research participants and a lack of evidence of interactional influence between modern and traditional retailers. Based on a preliminary investigation, the research objective necessarily was changed from exploring the implications of a modern retailer's procurement behaviours on traditional banana retailers to that of exploring the way the members of traditional banana supply chains manage their relationships in response to uncertainties in the industry. The refinement of the major research problem and associated minor research questions were used to signify the importance of the study as reflecting actual issues faced by the members of banana supply chains in Indonesia.

Chapter 2

A hypothetical research model to guide the study was derived from a review of extant literature as developed in Chapter 2 related to the research problem and questions. Five major areas of investigation were identified in the literature; viz., the informal economy, relationship marketing management, network structure and power relationship, uncertainty in supply chain network and agility in the supply chain. The hypothetical model suggested a

pathway to build supply chain competitive advantage through a supply chain agility that is supported by relationship marketing management in response to situations caused by environmental drivers and supply chain uncertainties.

Chapter 3

Chapter 3 was used to discuss an appropriate methodological framework for the study. The study was set as exploratory research under a constructivist paradigm that utilized a combination of two research strategies that are complementary; viz., case study and grounded theory. The potential weakness of a case study as a result of the data analysing process was covered by the powerful analytical tool of grounded theory; also, the issue of unclear data collection issue in grounded theory was covered by the data collection protocols of the case study.

Also discussed in this chapter was the selection of a single case for examination; within the case study, the presence of three main dyadic relationships across the supply chain network allowed for rich data generation and the enhancement of internal validity.

Chapter 4

The results of the interviews from the three dyads, farmer-collector, collector-wholesaler and wholesaler-retailer, were presented in Chapter 4. Data gathered via interviews provided insights into how supply chain members select their business partners, manage their operations within the supply chain, manage their relationships and respond to uncertainties in the business. The results also included an overview of the agility of the supply chain, the sources of uncertainty in the industry, factors influencing the relations of supply chain members and the limited number of competitive advantage.

Chapter 5

The use of thematic analysis of the data was reported in Chapter 5. Summaries of themes were presented within each of the Dyads 1, 2 and 3, and for the supply chain as a whole (i.e., themes across all three dyads). The findings were discussed with reference to the extant literature, study problem and research questions and the original hypothetical model. As a result of the analysis and integration of results, the chapter was used to present an up-to-date conclusion to the study in the form of a research outcome model (R.O.M.).

Chapter 6

Chapter Six, as the final chapter of the thesis, completed the study; a brief overview of the research study was provided and a number of possible areas for future research were suggested.

6.3 Limitations

As with all research, the current study could be seen to have a number of limitations; in this study, these were considered more as ‘constraints’ which needed attention. The study was conducted within the confines of a traditional banana supply chain, and situations faced by members of traditional banana supply chains may be different from those in modern banana supply chains or other traditional supply chains dealing with different products.

Furthermore, the findings reflect the behaviours and decisions of members of traditional Indonesian banana supply chains which are affected by various factors such as cultural norms, needs, geographical location and size of business. Therefore, an attempt to replicate the study under a different context may well yield different results. However, an attempt to conduct a similar study on a supply chain of similar product or industry characteristics may reflect some similar findings and act as a balance to the perceived limitations.

In addition, the difficulties in generating a substantially large number of research participants in the current banana supply chain study are acknowledged. While a relatively small number of participants is not inevitably fatal (Giorgi, 2002), current results should be considered an initial study in the area. Similarly, despite recognising the value of the research in terms of the study topic discipline and sub-field of specialisation, benefits would accrue from further quantitative studies.

6.4 Major research findings

There are five major findings:

- 1) The uncertainty faced by participants is caused by product competition, the characteristics of the product, dynamics in the market, and relationship uncertainties which stem from the informality of the economy.

- 2) The supply chain activities are governed according to a range of unspoken expectations such as 'buyer takes all' or 'flat price rules'. Moreover, the expectations change from individual to individual and dyad to dyad; i.e., they tend to be varied and inconsistent across the supply chain.
- 3) The traditional supply chain activities which signify the absence of resources leads participants to use their B2B relationships as the main means for creating/securing markets in order for them to be survive in the market, even when not particularly competitive. Informal and risky in nature, these relationships require supply chain members to trust and be committed to their partners, to tolerate and be patient with their partners' shortcomings, to be honest in their business activities and to be diplomatic in managing conflict so as not to let the other party get offended. Managing these relationships influences the supply chain' competitive advantage which, in this context of study, is viewed as the ability to provide a reliable and stable supply to customers.
- 4) At the network level, there is no coordination or alignment of activities to support supply chain agility; the flexibility in each dyad across the network has shown that the agility of the supply chain network is supported largely by the members' attitudes of acceptance, including toleration, patience and compensation.
- 5) While it is true that in every dyad there is one party that is considered more powerful/dominant, power distribution is not influenced by network position but rather, the inter-dependency of players in each dyad of the supply chain network. The inter-dependency is also the main factor that glues the network in the absence of formal B2B relationships.

6.5 Implication of findings

- 1) The informality of the economy has a role in influencing uncertainty in the industry. Circumstances in the informal economy are indistinct and, thus, theories/approaches developed in the context of a formal economy may not reflect the situation in the informal economy; they need to be changed entirely or, at least, modified to meet the environment.

- 2) The common drivers of agility are not applicable in the context of informal economies such as the traditional Indonesian banana supply chain because the supply chain is not supported by a virtual supply chain. However, the members of the supply chain have a high flexibility in tolerating the uncertainties in their business environment. This means different perspectives are required in the formal than the informal context.
- 3) The network theory developed through formal agreements and connected networks does not appear well suited for use in studying the B2B relationships in disconnected networks which operate with unspoken expectations such as the traditional Indonesian banana supply chain. Within the fragmented networks, changes in one dyad do not affect transactions in connecting dyads. This is shown in the way collectors cannot reject farmers who bring them bananas although they are already overloaded with bananas. Similarly, although market demand for banana falls, wholesalers cannot tell collectors to reduce the quantity of supply accordingly. On the other hand, relationship marketing theory does fit well because, apart from the products themselves, relationships, although informal, are the single most valuable resource that network members have, if they are well managed, to allow them to build competitive advantage through long-term committed relationships. Thus, the supply chain networks in this study are in reality, social networks.

6.6 Contributions of the study (theoretical & practical)

6.6.1 Theoretical

Informal economy

Although the study on the informal economy by Horn (2011) reported the capability of participants to change their product or business location in response to financial crisis, the current study and the literature on the informal economy has not directly highlighted the agility of participants in the informal economy in responding to uncertainty. Thus, this study has a value as an initial study in investigating the agility of participants of the informal economy on the dyadic level. The dyadic analysis has provided clarification of the management of B2B relationships that allow the supply chain members to reduce uncertainty in their business environment; this includes how business activities are governed by unspoken expectations and influenced by cultural values. The discussion found in existing literature focused on the capability of participants in informal economy to adapt to changes

triggered by financial crisis but this study goes beyond that. Through the analysis on three different dyadic relationships, this study has revealed how participants in informal economy can be highly flexible, what risk lies behind that flexibility, how it affects business partners, and how participants are being flexible in such a way in order to maintain their relationships and thus, secure long-term benefit for them.

Relationship marketing management

The theory of relationship marketing management has its roots in the relationship marketing concept that highlights the importance of having a customer focus in marketing; i.e., that a firm is to manage its relationships with stakeholders or partners in a way that enables the firm to deliver its ultimate product or service to the customer (Berry 1983; El Ansary, 2005). In other words, the customer is the king; i.e., the customer has the needs and requirements that the supply chain activities must aim to meet. Contrary to the existing literature, this study has shown that it is the customer who needs to adjust according to the supplier's terms and the customer needs to be more sensitive of the supplier's needs. Complying with the terms of supplier enables a customer to secure future supply which subsequently securing future market. As such, this study contributes to the existing literature by raising the importance of supplier relationship management in the context of informal economy.

Essentially, relationship marketing management is about managing the customer-supplier relationships in a way that allows the marketing strategy to be successful. This study contributes to the existing literature by proving a very simple and clear model of how relational factors such as trust and commitment expressly enable supply chain members to create a market for them in the midst of uncertain and competitive situations particularly in informal economy.

Agility

The results from this study have shown that the current concept/theory on agility is not as applicable under an informal economy context where the supply chain network is lacking in communication and coordination. Nevertheless, a consistent attitude of toleration that appears across the banana supply chain network shows that its members align their attitudes, rather than activities, in a way that allows flexibility. This reflects a different perspective of supply chain agility that can be added to the existing literature

Network structure & power relationship

The evidence in this study has clarified the view that, even in the informal economy, network structure can be very dynamic in a sense that network members can change their partners anytime despite having a long-term relationship. Nevertheless, the dynamics of interaction may well be hampered by the absence of any form of relationship contract. Thus, supply chain members do have the chance to be opportunistic; e.g., by developing adversarial or short-term relationships where members can leave relationships anytime they want without having to worry about sanctions.

This study contributes to the literature by showing that the distribution of power across the banana supply chain is not influenced by an individual's network position, but rather by the inter-dependency of dyadic members within the network. This inter-dependency leads to long-term relationships. The inter-dependency also creates a paradox in that the dyadic members are prepared deliberately to reduce their potential profit in order to maintain their professional relationship, whereas it is profit on which members rely most to keep their business going and a higher profit tends to be the basis on which members select a preferred partner. On the other hand, this interdependency encourages dyad members to manage their exercise of power within the context of informal and fragmented network to preserve business relationships. The unique relationship between informal and fragmented network, power relationship, and business relationship emerge from this study have further extend the existing literature.

Supply chain uncertainty and risk mitigation

This study contributes to the existing literature by providing information on how participants, particularly in traditional supply chains, in the informal economy address uncertainty in the absence of collaboration and information technology through their relationships. The relationships allow them to take risky actions, promoting themselves to be understanding partners by lending their partners money or allowing their buyers to postpone payment in absence of transaction or trading contract. These risky actions, of which the participants cannot be certain of the results, taken in order to secure supply and demand, signify that what participants do in coping with uncertainty and mitigate supply chain risks is invest in their B2B relationships.

6.6.2 Practical

Persons wishing to become involved in, or those currently involved in, the Indonesian banana industry, particularly within a traditional supply chain can use the findings from this study in marketing planning. Through this study, they can be informed of the industry conditions, individual behaviours and expectations of members at each dyad level in a supply chain. Similarly, limitations associated with supply chain members, particularly capital limitations, can be considered in regard to possible opportunities to develop collaborative relationships. Moreover, any person, or firm, operating in a similar industry context may use the findings from this study to better understand what relational skills they need to develop in order to improve their B2B relationships.

For policy makers and agricultural authorities, this study has demonstrated that what is lacking in the industry is a lack of product and procedural standards; these need to be developed and supported in order to improve the banana supply chains operating in a traditional way. The study reveals that lack of capital or financial support is major issue among members of traditional supply chains particularly farmers. Policy makers can support farmers by providing micro-financing services with soft terms and conditions for members of the chains. Along with that, the local agricultural authorities can initiate the formation of collecting centre in the villages and oversee the activities. The centre will promote fair-trading and fair-price in the upstream. Furthermore, such developments can potentially provide an opportunity for traditional and modern banana supply chains to work more closely, more co-operatively and with improved financial outcomes.

The study shows that the activities in the banana supply chains are done in traditional way without proper procedural standards, adequate equipment, and virtual chain. Such condition leaves no room to reduce uncertainty unless members of the chains are willing to change. Nevertheless, there is a practical solution for this situation. Members in each dyad of the supply chain can instigate a written contract between them. The contract should mention in details the responsibilities of each party and the consequences followed should one party fail to fulfil his responsibility. Not only such contract will help to reduce uncertainty in supply chain activities, it will also support the long-term relationships.

The current production procedures appear to be inadequate, in that they lead to a low quality of products, resulting in a low price and limited life-style for producers. The production process of bananas already entails high risk as farmers are unable to control weather patterns

or cope with intermittent attacks by banana diseases or pests. Given the high risks associated with production and the increasing pressures for lower prices, there is a general concern in the industry that there is not enough incentive for farmers to grow banana trees. Farmers in the current study have expressed this concern and pointed out examples of farmers who have decided to reduce the size of their banana farm and/or switch to other crops. Potentially, this leads to decreased numbers of bananas in the market and, inevitably, tougher competition for banana traders. Not only does this make it difficult for consumers to find bananas but, also, it can negatively influence the banana processing sector where many firms use bananas as their main component; e.g., banana chips processors, banana crisps manufacturers, banana fritter sellers or grilled banana sellers.

6.7 Value of the research outcomes model

6.7.1 Academic

For research purposes, the developed research outcomes model (R.O.M.) can serve as a model for analysing/studying how participants in informal economy supply chains might build competitive advantage in an environment that is quite dynamic.

For teaching and learning purposes, the outcomes model can be an exemplar upon which agribusiness studies, particularly in and about Indonesian universities, can demonstrate how Indonesian banana supply chain members respond to an uncertain yet dynamic environment and manage relationships to build competitive advantage in the informal economy.

6.7.2 Non-Academic

For a practitioner, the R.O.M. provides them with information of the factors of uncertainty for which they need to be prepared, what factors need attention and what effective strategies are needed to be developed in order to build competitive advantage and achieve success in the industry.

By means of the research outcomes model, policy makers are alerted to the fact that there are no resources other than relationships that traditional banana supply chain members can utilize; largely due their low capital base. Thus, generally, they are unable to generate financial support on their own; at the same time as they need external support, they remain unaware of whether or not such support is available.

Nevertheless, in line with the concept of financial support, the R.O.M. shows that instability or variability of supply is inevitable due to variations in the production systems. This problem can be reduced by promoting a standardised production system; one which would provide farmers with agricultural extension programmes or workshops.

6.8 Confirmation of moving forward the body of knowledge

Through this study of supply chains operating in an informal economy, it can be seen that studying the agility of supply chains in response to uncertainty requires a different approach. Supply chain agility that relies on a virtual supply chain and coordination to promote speed and flexibility are not applicable in the context of this environment. The findings in the study have shown that what is needed is the alignment of attitudes that promote toleration, patience, diplomatic conflict management, honesty, trustworthiness and loss sharing; an alignment that leads to relationship commitment. While the concept of the importance of the informal economy has increased due to its importance to the nation's economy and its agility in responding to an uncertain environment, the concept has not taken hold in the banana supply chain industry. This study has shown that the alignment of activities is not what is needed in the context of the informal economy; rather the alignment of attitude is required. This new perspective of agility contributes to moving forward the body of knowledge.

In regard to the informal economy, the findings in this study have provided a deeper insight into the nature of agility in the supply chain network. While previous studies have tended to focus only on agility at the firm level, this study has covered relationships both within and across levels of the supply chain network. Through analysis of each dyad in the network, further clarification has been made as to how supply chain members preserve their network through unspoken expectations and norms without even having to communicate and coordinate their activities to manage to build competitive advantage within the given context.

6.9 Possible future research extensions

In this study, the strategies developed by members of Indonesian banana supply chains in responding to uncertainties in their dynamic environment have been explored. As such, it is a qualitative exploratory study. For future research, the findings from this study can be used in developing a quantitative study.

Part of the uncertainty in the supply chain is triggered by the characteristics of the product and the marketing of the product. A comparative study of different supply chains under the same informal setting/economy may lead to more comprehensive findings.

The supply chain network is glued by network inter-dependency. However, to what extent this inter-dependency affects the performance of each member can be examined further. Therefore, for further research, a quantitative survey on the affect of network-interdependency on performance may uncover further interesting results.

6.10 Thesis conclusion

This thesis has described how the research was first developed, built on related theories, framed methodologically, and evolved through data analysis to find themes within and across the supply chain. Despite the limitations, the major findings in this research have challenged findings from some of the previous studies, particularly in regards to supply chain agility, and have enhanced the studies on the informal economy both in terms of relationship marketing management and network structure. The findings in the research, together with the new research outcome model (R.O.M.) have moved forward the body of knowledge for the benefit of both academics and non-academics.

REFERENCES

- Abera-Kanyamuhungu, A. M. (2005). *Patterns of predation by natural enemies of the banana weevil (Coleoptera: Curculionidae) in Indonesia and Uganda*. PhD, University of Massachusetts-Amherst, MA.
- Ahn, H. J., Chiderhouse, P., Vossen, G., & Lee, H. (2012). Rethinking XML-enabled agile supply chains. *International Journal of Information Management*, 32(1), 17-23.
- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1-18.
- Arvitrida, N. I., Pujawan, I. N., & Supriyanto, H. (2010). Simulasi Koordinasi Supply Chain Pisang di Jawa Timur: Studi Kasus Pisang Mas dari Lumajang. Retrieved 27 May 2014, from Institut Teknologi Sepuluh Nopember Surabaya, Indonesia <http://digilib.its.ac.id/public/ITS-Master-7856-2506203005-paper.pdf>
- Bachmann, R. (2001). Trust, power and control in trans-organizational relations. *Organization Studies*, 22(2), 337-365.
- Badan Litbang Pertanian. (2005). *Prospek dan Arah Pengembangan Agribisnis Pisang*. Jakarta: Departemen Pertanian.
- Balsevich, F., Berdegue, J. A., Flores, L., Jano, P., Reardon, T. A., & Schuetz, P. (2007). Country Studies (Central America): Countries with consolidating and expanding supermarkets and their supply chains. In B. Vorley, A. Fearne & D. Ray (Eds.), *Regoverning markets: A place for small-scale producers in modern agri-food chains?* (pp. 21-40). Hampshire: Gower Publishing Limited.
- Bejou, D., Ennew, C. T., & Palmer, A. (1998). Trust, ethics and relationship satisfaction. *International Journal of Bank Marketing*, 16(4), 170-175.
- Belaya, V., & Hanf, J. H. (2009). The two sides of power in business-to-business relationships: implications for supply chain management. *The Marketing Review*, 9(4), 361-381.
- Belaya, V., & Hanf, J. H. (2012). Managing Russian agri-food supply chain networks with power. *Journal on Chain and Network Science*, 12(3), 215-230.
- Berdegue, J. A., Balsevich, F., Flores, L., Mainville, D., & Reardon, T. (2003). Food safety in food security and food trade. Case study: Supermarkets and quality and safety standards for produce in Latin America. Available from IFPRI Retrieved August 4, 2011, from International Food Policy Research Institute http://www.ifpri.org/sites/default/files/pubs/2020/focus/focus10/focus10_12.pdf
- Berry, L. L. (1983). Relationship marketing. In L. L. Berry, G. L. Shostock & G. D. Upah (Eds.), *Emerging Perspectives on Services Marketing* (Vol. II, pp. 25-28). Chicago: American Marketing Association.
- Beverland, M., & Lindgreen, A. (2010). What makes a good case study? A Positivist review of qualitative case research published in *Industrial Marketing Management*, 1971-2006. *Industrial Marketing Management*, 39(56-63).
- Bigneat, C., Koc, A. A., & Lemeilleur, S. (2009). Small producers, supermarkets, and the role of intermediaries in Turkey's fresh fruit and vegetable market. *Agricultural Economics*, 40, 807-816.
- Birkinshaw, J., & Mol, M. (2006). How management innovation happens. *MIT Sloan Management Review*, 47(4), 80-88.
- Boehlje, M. (1999). Structural changes in the agricultural industries: how do we measure, analyze and understand them? *American Journal of Agricultural Economics*, 81(5), 1028-1041.

- Bogataj, M., Bogataj, L., & Vodopivec, R. (2005). Stability of perishable goods in cold logistic chains. *International Journal of Production Economics*, 93-94, 345-356.
- Bond, M. H. (1996). *The Handbook of Chinese Psychology*. Hongkong: Oxford University Press.
- Bourlakis, C., & Bourlakis, M. (2004). The future of food supply chain management. In M. A. Bourlakis & P. W. H. Veightman (Eds.), *Food Supply Chain Management* (pp. 223-228). Oxford: Blackwell Publishing.
- Bowen, J. R. (1986). On the political construction of tradition: *Gotong Royong* in Indonesia. *Journal of Asian Study*, XLV(3), 545-560.
- Bowersox, D. J., Closs, D. J., & Stank, T. P. (2003). How to master cross-enterprise collaboration. *Supply Chain Management Review*, 7(4), 18-27.
- Brass, D., Galaskiewicz, J., Greve, H., & Tsai, W. (2004). Taking stock of networks and organizations: A multilevel perspective. *Academy of Management Journal*, 47(6), 795-817.
- Bridley, C., & Oxborrow, L. (2014). Aligning the sustainable supply chain to green marketing needs: A case study. *Industrial Marketing Management*, 43(1), 45-55.
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-cultural Psychology*, 1, 185-216.
- Buckley, P. J., & Ghauri, P. N. (2004). Globalisation, economic geography and the strategy of multinational enterprise. *Journal of International Business Studies*, 35(2), 81-98.
- Burt, R. S. (1992). *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.
- Burt, R. S. (2000). The network structure of social capital. *Research in Organizational Behavior*, 22, 345-423.
- Cai, X., Chen, J., Xiao, Y., Xu, X., & Yu, G. (2013). Fresh-product supply chain management with logistic outsourcing. *Omega*, 41(4), 752-765.
- Cao, M., & Zhang, Q. (2011). Supply chain collaboration: impact on collaborative advantage and firm performance. *Journal of Operations Management*, 29, 163-180.
- Carpenter, C., & Suto, M. (2008). *Qualitative Research for Occupational and Physical Therapists: A Practical Guide*. Oxford: Blackwell Publishing.
- Cassar, A., & Rigdon, M. (2011). Trust and trustworthiness in networked exchange. *Games and Economic Behavior*, 71(2), 282-303.
- Chandra, C., & Kumar, S. (2001). Enterprise architectural framework for supply-chain integration. *Industrial Management & Data Systems*, 101(6), 290-304.
- Charmaz, K. (2006). *Constructing Grounded Theory. A Practical Guide Through Qualitative Analysis*. London: Sage Publications.
- Chen, K., Shepherd, A. W., & Silva, C. d. (2005). Changes in food retailing in Asia: Implications of supermarket procurement practices for farmers and traditional marketing systems (M. a. F. S. Agricultural Management, Trans.). Rome: Food and Agriculture Organization of the United Nations.
- Chen, W.-H., & Chiang, A.-H. (2011). Network agility as a trigger for enhancing firm performance: a case study of a high-tech firm implementing the mixed channel strategy. *Industrial Marketing Management*, 40, 643-651.
- Cheng, J.-H., & Sheu, J.-B. (2012). Inter-organizational relationships and strategy quality in green supply chains - Moderated by opportunistic behavior and dysfunctional conflict *Industrial Marketing Management*, 41, 563-572.
- Chilisa, B. (2012). *Indigenous Research Methodologies*. Thousand Oaks, CA: Sage.
- Chinese Culture Connection. (1987). Chinese values and the search for culture free dimensions of culture. *Journal of Cultural Psychology*, 18, 143-164.
- Christopher, M. (2000). The agile supply chain - competing in volatile markets. *Industrial Marketing Management*, 29(1), 37-44.
- Chua, W. F. (1986). Radical developments in accounting thought. *The Accounting Review*, 61(4), 61-632.

- Claycomb, C., & Frankwick, G. L. (2010). Buyer's perspectives of buyer-seller relationship development. *Industrial Marketing Management*, 39, 252-263.
- Cook, K. S., & Emerson, R. M. (1978). Power, equity and commitment in exchange networks. *American Sociological Review*, 43, 712-739.
- Cook, K. S., Emerson, R. M., Gillmore, M. R., & Yamagishi, T. (1983). The distribution of power in exchange network: Theory and experimental results. *American Journal of Sociology*, 89, 275-305.
- Cox, A., & Chicksand, D. (2007). Are win-win feasible? Power relationships in agri-food supply chains and markets. In D. Burch & G. Lawrence (Eds.), *Supermarkets and Agri-food Supply Chains* (pp. 51-73). Cheltenham: Edward Elgar Publishing.
- Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. CA: Sage Publications.
- Cunningham, W., & Maloney, W. F. (2000). Measuring vulnerability: Who suffered in the 1995 Mexican crisis? : The World Bank.
- Daryanto. (2002). *Langkah penanggulangan penyakit layu pisang di Indonesia*. Paper presented at the Seminar Nasional Pengendalian Penyakit Layu Pisang: Mencegah Kepunahan, Mendukung Ketahanan Pangan dan Agribisnis, Padang, Indonesia.
- Das, T. K., & Teng, B. S. (2001). Trust, control and risk in strategic alliances: an integrated framework. *Organization Studies*, 22(2), 251-283.
- Davis, R. I., Fegan, M., Tjahjono, B., & Rahamma, S. (2000). An outbreak of blood disease of banana in Irian Jaya, Indonesia. *Australasian Plant Pathology*, 29, 152.
- Davis, T. (1993). Effective supply chain management. *Sloan Management Review*, 34(3), 35-46.
- Diniarti, F. (2009). *Analisa Usaha Agroindustri Keripik Pisang di Kabupaten Karanganyar*. Thesis. Faculty of Agriculture, Sebelas Maret University. Surakarta.
- Direktorat Jenderal Hortikultura. (2008). *Pengelolaan Rantai Pasokan Pisang Mas Kirana Kabupaten Lumajang*. Jakarta: Direktorat Budidaya tanaman Buah.
- Direktorat Pengolahan dan Pemasaran Hasil Hortikultura. (2005). *Road Map Pisang: Pasca Panen, Pengolahan dan Pemasaran Hasil Pisang*.
- Direktur Budidaya Tanaman Buah. (2008). *Supply chain management pisang kepok*. Retrieved 26 May 2014, from Direktorat Jenderal Hortikultura, Indonesia <http://www.ina.or.id/knoma-hpsp/pa/MoA-09-SCM-PisangKepokBanjar.pdf>
- Douglas, M. (1992). *Risk and Blame: Essays in Cultural Theory*. New York: Routledge.
- Doz, Y. (2011). Qualitative research for international business. *Journal of International Business Studies*, 42, 582-590.
- Economist Intelligence Unit. (2009). *Organisational agility: how business can survive and thrive in turbulent times*. London: EMC Corporation.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, 21(10), 1105-1121.
- El-Ansary, A. I. (2005). Relationship marketing management: A school in the history of marketing thought. *Journal of Relationship Marketing*, 4(1/2), 43-56.
- Emerson, R. M. (1962). Power-dependence relations. *American Sociological Review*, 27, 31-40.
- Emerson, R. M. (1972). Exchange theory, part II: Exchange relations and networks. In J. Berger, M. Zelditch & B. Anderson (Eds.), *Sociological Theories in Progress*. Boston: Houghton Mifflin.
- Emongor, R., & Kirsten, J. (2009). The impact of South African supermarkets on agricultural development in the SADS: A case study in Zambia, Namibia, and Botswana. *Agrekon*, 48(1), 60-84.
- Eremenco, S. L., Cella, D., & Arnold, B. J. (2005). A comparative method for the translational and cross-cultural validation of health status questionnaires. *Evaluation & Health Professions*, 28(2), 212-232.

- Euromonitor International. (2007). Health of the Nation – Indonesia. Retrieved 2nd January 2016 <http://www.euromonitor.com/consumer-health-in-indonesia/report>.
- Euromonitor International. (2009a). Consumer Lifestyles in Indonesia Retrieved 2nd January 2016 <http://www.euromonitor.com/consumer-lifestyles-in-indonesia/report>.
- Euromonitor International. (2009b). Organic Packaged Food - Indonesia. Retrieved 2nd January 2016 <http://www.euromonitor.com/organic-packaged-food-in-indonesia/report>
- Faiguenbaum, S., Berdegue, J. A., & Reardon, T. (2002). The rapid rise of supermarkets in Chile: Effects on dairy, vegetable, and beef chains. *Development Policy Review*, 20(4), 459-471.
- Fawcett, S. E., Jones, S. L., & Fawcett, A. M. (2012). Supply chain trust: The catalyst for collaborative innovation. *Business Horizons*, 55(2), 163-178.
- Fernando, Y., Ho, T. F., Algunaid, N., & Zailani, S. (2013). A study of relationship marketing in Malaysian banks: Does Guanxi influence small medium enterprise owners' satisfaction. *Journal of Relationship Marketing*, 12(1), 22-40.
- Firdaus, M., & Silalahi, B. G. S. (2007). Posisi bersaing nenas dan pisang Indonesia di pasar dunia. *Jurnal Agribisnis dan Ekonomi Pertanian*, 1(2), 23-30.
- Fisher, M. L. (1997). What is the right supply chain for your product? *Harvard Business Review*, March-April, 105-116.
- Forrester, J. W. (1961). *Industrial Dynamics*. Massachusetts: MIT Press, Cambridge.
- Freeman, L. C. (1979). Centrality in social networks: Conceptual clarification. *Social Networks*, 1, 215-239.
- Freytag, P., & Ritter, T. (2005). Dynamics of relationships and networks: Creation, maintenance and destruction as managerial challenges. *Industrial Marketing Management*, 34(644-547).
- Fuchs, D., Kalfagianni, A., & Arentsen, M. (2009). Retail power, private standards, and sustainability in the global food system. In J. Clapp & D. Fuchs (Eds.), *Corporate Power in Global Agrifood Governance* (pp. 29-60). Massachusetts: Massachusetts Institute of Technology.
- Fullerton, G. (2003). When does commitment lead to loyalty. *Journal of Service Research*, 5(4), 333-344.
- Gadde, L.-E., Huemer, L., & Håkansson, H. (2003). Strategizing in industrial networks. *Industrial Marketing Management*, 32(5), 357-364.
- Gaur, A. S., Mukherjee, D., Gaur, S. S., & Schmid, F. (2011). Environmental and firm level influences on inter-organizational trust and SME performance. *Journal of Management Studies*, 48(8), 1752-1781.
- Gephart Jr, R. (2004). What is qualitative research and why is it important? *Academy of Management Journal*, 47(4), 454-462.
- Gharehbashlani, R., & Seify, M. (2014). Investigating the effect of relational marketing on competitive advantage: Isfahan's REFAH chain stores. *International Journal of Academic Research in Business and Social Sciences*, 4(2), 2222-6990.
- Gilchrist, V. J., & Williams, R. L. (1999). Key informant interview. In B. F. Crabtree & W. L. Miller (Eds.), *Doing Qualitative Research* (2 ed.). Thousand Oaks: Sage Publications.
- Giorgi, A. (2002). The Question of Validity in Qualitative Research. *Journal of Phenomenological Psychology*, 33(1), 1-18.
- Goetz, J. P., & LeCompte, M. D. (1984). *Ethnography and Qualitative Design in Educational Research*. Orlando: Academic Press.
- Golden, W., & Powell, P. (1999). Exploring inter-organisational systems and flexibility in Ireland: A case of two value chain. *International Journal of Agile Management Systems*, 1(3), 169-176.

- Goldman, S. L., Nagel, R. N., & Preiss, K. (1995). *Agile Competitors and Virtual Organizations: Strategies for Enriching the Customer*. London: Van Nostrand Reinhold.
- Gosling, J., Purvis, L., & Naim, M. M. (2010). Supply chain flexibility as a determinant of supplier selection. *International Journal of Production Economics*, 128, 11-21.
- Gregor, S., & Galazka, S. S. (1990). The use of key informant networks in the assessment of community health. *Family Medicine*, 22(2), 118-121.
- Grönroos, C. (1994). From marketing mix to relationship marketing: Towards a paradigm shift in marketing. *Management Decision*, 32(2), 4-20.
- Grönroos, C. (2011). A service perspective on business relationships: The value creation, interaction and marketing interface. *Industrial Marketing Management*, 40(2), 240-247.
- Grunert, K. G. (2003). *How changes in consumer behavior and retailing affect competence requirements for food producers and processors*. Paper presented at the Global Markets for High-Value Foods, U.S. Department of Agriculture, Economic Research Service.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (2 ed.). Thousand Oaks, CA: Sage.
- Gunasekaran, A., Lai, K.-h., & Cheng, T. C. E. (2008). Responsive supply chain: A competitive strategy in a networked economy. *Omega*, 36(4), 549-564.
- Hadi, I. (2009). *Analisis faktor-faktor yang mempengaruhi aliran perdagangan pisang dan mangga Indonesia ke negara tujuan*. Institut Pertanian Bogor, Bogor.
- Håkansson, H., & Ford, D. (2002). How should companies interact in business networks? *Journal of Business Research*, 55, 133-139.
- Hallebone, E., & Priest, J. (2009). *Business and Management Research: Paradigms and Practices*. New York: Palgrave Macmillan.
- Hardaker, J. B., Huirne, R. B. M., Anderson, J. R., & Lien, G. (2004). *Coping with Risk in Agriculture* (2 ed.). Cambridge, MA: Cabi Pub.
- Hart, K. (1973). Informal income opportunities and urban employment in Ghana. *The Journal of Modern African Studies*, 11, 61-89.
- Hennig Thurau, T., Gwinner, K. P., & Gremler, D. D. (2002). Understanding relationship marketing outcomes: An integration of relational benefits and relationship quality. *Journal of Service Research*, 4(3), 230.
- Hernandez, R., Reardon, T., & Berdegue, J. (2007). Supermarkets, wholesalers, and tomato growers in Guatemala. *Agricultural Economics*, 36, 281-290.
- Hingley, M. K. (2005a). Power imbalanced relationship: Cases from UK fresh food supply. *International Journal of Retail & Distribution Management*, 33(8), 551-569.
- Hingley, M. K. (2005b). Power to all our friends? Living with imbalance in supplier-retailer relationships. *Industrial Marketing Management*, 34, 848-858.
- Hirschheim, R. (1992). Information systems epistemology: An Historical perspective. In R. Galliers (Ed.), *Information Systems Research: Issues, Methods and Practical Guidelines* (pp. 28-60). Oxford: Blackwell Scientific.
- Hobson, E. W. (2011). The Importance of the informal economy for local economic development (LED) in Africa *Local Economic Development Network of Africa*, October(2).
- Horn, Z. E. (2011). Coping with crisis: Lingering recession, rising inflation, and the informal workforce *Inclusive Cities Project report: WIEGO (Women in Informal Employment: Globalizing and Organizing)*.
- Hossain, L. (2009). Effect of organisational position and network centrality on project coordination. *International Journal of Project Management*, 27(7), 680-689.

- Hoyt, J., & Huq, F. (2000). From arms-length to collaborative relationships in the supply chain. *International Journal of Physical Distribution & Logistics Management*, 30(9), 750-764.
- Hughes, D. (2007). *Demand trends and their impact on supply chain innovation*. Paper presented at the Proceedings of the international symposium on fresh produce supply chain management, Chiang Mai, Thailand.
- Huitfeldt, H., Sida, & Jütting, J. (2009). *Informality and informal employment*. OECD Development Centre.
- Hunt, S. D., & Arnett, D. B. (2006). The explanatory foundations of relationship marketing theory. *Journal of Business & Industrial Marketing*, 21(2), 72-87.
- ILO. (2007a). Global Employment Trends Model.
- ILO. (2007b). Visions for Asia's Decent Work Decade: Sustainable Growth and Jobs to 2015. Retrieved 29/10/2014 http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/genericdocument/wcms_083624.pdf
- Indonesian Commercial Newsletter. (2011). Perkembangan bisnis ritel modern (The growth of modern retail business) (Vol. Juni 2011). Jakarta: PT Data Consult Sudhi Karsa.
- International Markets Bureau. (2011). The Indonesian consumer - Behaviour, attitudes and perception toward food products.
- Jahoda, M. (1956). Psychological issues in Civil Liberties. *American Psychologist*, 11, 234-240.
- Japhet, L., & Tar, U. (2013). The use of grounded theory technique as a practical tool for qualitative data collection and analysis. *The Electric Journal of Business Research Methods*, 11(1), 29-40.
- Javalgi, R. R. G., Gross, A. C., Joseph, W. B., & Granot, E. (2011). Assessing competitive advantage of emerging markets in knowledge intensive business services. *Journal of Business & Industrial Marketing*, 26(3), 171-180.
- Johnsen, R. E., & Ford, D. (2006). Interaction capability development of smaller suppliers in relationships with large customers. *Industrial Marketing Management*, 35(8), 1002-1015.
- Johnson, M. S., Sivadas, E., & Garbarino, E. (2008). Customer satisfaction, perceived risk and affective commitment: An investigation of directions of influence. *Journal of Service Marketing*, 22(5), 353-362.
- Kamrad, B., & Siddique, A. (2004). Supply contracts, profit sharing, switching, and reaction options. *Management Science*, 50(1), 64-82.
- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review*, 110(2), 265-284.
- Ketelaar, J. (2007). *GAP, market access, farmers and field realities: Making the connection through better farmer education in integrated production and pest management*. Paper presented at the Proceedings of the international symposium on fresh produce supply chain management, Chiang Mai, Thailand.
- Keynes, J. M. (1937). The general theory of employment. *The Quarterly Journal of Economics*, 51(2), 209-223.
- Kilkenny, M., & Fuller-Love, N. (2014). Network analysis and business networks. *International Journal of Entrepreneurship and Small Business*, 21(3), 303-316.
- Klein, R., & Rai, A. (2009). Interfirm strategic information flows in logistics supply chain relationships. *MIS Quarterly*, 33(4), 735-762.
- Kono, Y., & Goto, J. (2002). Marketing channel development. In J. Goto & H. Mayrowani (Eds.), *Potentials and Constraints of Banana Based Farming System: A Case of an Upland Village in West Java* (pp. 41-46). Tsukuba, Japan: JIRCAS.
- Kotler, P. (1992). It's time for total marketing. *Business Week Advance: Executive Brief*, 2, 1-20.
- Kratzer, J., & Letti, C. (2009). Distinctive roles of lead users and opinion leaders in the social networks of schoolchildren. *Journal of Consumer Research*, 36, 646-659.

- Kuhn, T. (1962). *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Kuntarsih, S., Kustiati, T., Iswari, D., & Dimiyati, A. (2007). *How supply chain management gives benefits to banana growers*. Paper presented at the International symposium on fresh produce supply chain management, Chiang Mai, Thailand.
- Lai, K.-h., Bao, Y., & Li, X. (2008). Channel relationship and business uncertainty: Evidence from the Hong Kong market. *Industrial Marketing Management*, 37(6), 713-724.
- Lauckner, H., Paterson, M., & Krupa, T. (2012). Using constructivist case study methodology to understand community development processes: Proposed methodological questions to guide the research process. *The Qualitative Report*, 17(25), 1-22.
- Lee, H. L. (2002). Aligning supply chain strategies with product uncertainties. *California Management Review*, 44(3), 105-119.
- Lee, H. L., Padmanabhan, V., & Whang, S. (1997). Information distortion in supply chain. The bullwhip effect. *Management Science*, 43(4), 546-558.
- Lewin, B., Giovannucci, D., & Varangis, P. (2004). Coffee markets: New paradigms in global supply and demand *Agriculture and Rural Development Discussion Paper 3*: The World Bank Group.
- Lewis, M., Hornyak, R., & Patnayakuni, R. (2008). Business network agility for global demand-supply synchronization: A comparative case study in the apparel industry. *Journal of Global Information Technology Management*, 11(2), 5-29.
- Li, J. J., & Zhou, K. Z. (2010). How foreign firms achieve competitive advantage in the Chinese emerging economy: Managerial ties and market orientation. *Journal of Business Research*, 63(8), 856-862.
- Li, S., Murat, A., & Huang, W. (2009). Selection of contract suppliers under price and demand uncertainty in a dynamic market. *European Journal of Operational Research*, 198, 830-847.
- Liamputpong, P. (2013). *Qualitative Research Methods*. Melbourne, Victoria: Oxford University Press.
- Lin, H., Ke, W., Wei, K. K., & Hua, Z. (2013). The impact of IT capabilities on firm performance: The mediating roles of absorptive capacity and supply chain agility. *Decision Support System*, 54(3), 1452-2462.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Beverly Hills, CA: Sage.
- Liu, S., Lin, J., & Hayes, K. H. (2010). An agile and diversified supply chain: Reducing operational risks. *Competitiveness Review: An International Business Journal*, 20(3), 2010.
- Liu, Y., Li, Y., Tao, L., & Wang, Y. (2008). Relationship stability, trust and relational risk in marketing channels: evidence from China. *Industrial Marketing Management*, 37, 432-446.
- Liu, Y., Zhang, Q., & Li, Q. (2014). A research on mechanisms and countermeasures of the food safety incidents occurring on food supply chain. *Journal of Service Science and Management*, 7, 337-345.
- Lockamy-III, A., Childerhouse, P., Disney, S. M., Towill, D. R., & McCormack, K. (2008). The impact of process maturity and uncertainty on supply chain performance: An empirical study. *International Journal of Manufacturing Technology and Management*, 15(1), 12-27.
- Machmud, M. (1985). *Bacterial wilt in Indonesia*. Paper presented at the International Workshop held at PCARRD: Bacterial Wilt Disease in Asia and South Pacific, Los Banos, The Philippines.
- Mahmudah, G., Lintang AS, H., Winant F., F., & Triana F., S. (2013). Peranan ekstrak kulit pisang untuk mengatasi katarak dengan hewan coba tikus (*Rattus norvegicus*). Retrieved 7 May 2014 [http://www.google.com.au/url?sa=t&rct=j&q=peran pisang](http://www.google.com.au/url?sa=t&rct=j&q=peran%20pisang)

indonesia&source=web&cd=8&cad=rja&uact=8&ved=0CGcQFjAH&url=http%3A%2F%2Fartikel.dikti.go.id%2Findex.php%2FPKM-P%2Farticle%2Fdownload%2F38%2F38&ei=VQ1qU4ZUxL6QBebigcgE&usg=AFQjCNG5UB_ACGpFrm6lITkC9cB7e_sD9g&sig2=yUXknY18Wgwqmw2SVAPZcg&bvm=bv.66111022,d.dGI

- Maimunah, N. (2006). *Pemanfaatan Serat Pisang Sebagai Bahan Kerajinan Tekstil di Perusahaan Tenun dan Kerajinan Kreatif Ridaka Pekalongan*. Thesis. Literature Faculty. University of Sebelas Maret, Indonesia.
- Maloni, M., & Benton, W. C. (2000). Power influences in the supply chain. *Journal of Business Logistics*, 21(1), 49-73.
- Manuj, I., & Mentzer, J. T. (2008). Global supply chain risk management strategies. *International Journal of Physical Distribution & Logistics Management*, 38(3), 192-223.
- Maruyama, M., & Trung, L. V. (2007). Supermarkets in Vietnam: Opportunities and obstacles. *Asian Economic Journal*, 21(1), 19-46.
- Mason-Jones, R., Naylor, B., & Towill, D. R. (2000). Lean, agile, or leagile? Matching your supply chain to the market place. *International Journal of Production Research*, 38(17), 4061-4070.
- Medabesh, A., & Mohiuddin, M. G. (2011). Sustaining brands with changing environmental dynamics. *Global Conference on Business and Finance Proceedings*, 6(2), 682-690.
- Meijerink, G., & Roza, P. (2007) The role of agriculture in economic development. *Vol. Paper 4. Markets, Chains and Sustainable Development* (4 ed.). Wageningen University.
- Merschmann, U., & Thonemann, U. W. (2011). Supply chain flexibility, uncertainty and firm performance: an empirical analysis of German manufacturing firms. *International Journal of Production Economics*, 130, 43-53.
- Mesra, B. (2002). *Formulasi Strategi Perusahaan Agribisnis Pisang Cavendish pada PT. Nusantara Tropical Fruit*. Master, Institut Pertanian Bogor, Bogor.
- Meuwissen, M., Alfons, P. M., Velthuis, G. J., Hogeveen, H., & Huirne, R. B. M. (2003). Traceability and certification in meat supply chains. *Journal of Agribusiness*, 21(2), 167-181.
- Milliken, F. J. (1987). Three types of perceived uncertainty about environment: State, effect, and response uncertainty. *Academy of Management Review*, 12, 133-143.
- Minten, B., Randrianarison, L., & Swinnen, J. F. M. (2009). Global retail chains and poor farmers: Evidence from Madagascar. *World Development*, 37(11), 1728-1741.
- Mohr, J., & Spekman, R. (1994). Characteristics of partnership success: partnership attributes, communication behavior, and conflict resolution techniques. *Strategic Management Journal*, 15(2), 135-152.
- Mol, M., & Birkinshaw, J. (2009). The sources of management innovation: When firms introduce new management practices. *Journal of Business Research*, 62, 1269-1280.
- Moliner, M. A., Sánchez, J., Rodríguez, R. M., & Callarisa, L. (2007). Relationship quality with a travel agency: The influence of the postpurchase perceived value of a tourism package. *Tourism and Hospitality Research*, 7(3-4), 194-211.
- Möller, K., Rajala, R., & Westerlund, M. (2008). Service innovation myopia? A new recipe for client-provider value creation. *California Management Review*, 50(3), 31-48.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20-38.
- Mowday, R. T., & Steers, R. M. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14(April), 224-247.
- Nasir, & Jumjunidang. (2003). Karakterisasi ras *Fusarium oxysporum* f. sp. *cubense* dengan metoda Vegetative Compatibility Group Test dan identifikasi kultivar pisang yang diserangnya. *Jurnal Hortikultura*, 13(4), 276-284.

- Naylor, J. B., Naim, M. M., & Berry, D. (1999). Leagility: integrating the lean and agile manufacturing paradigms in the total supply chain. *International Journal of Production Economics*, 62, 107-118.
- Nganje, W. E., & Skilton, P. (2011). Food risks and type I & II errors. *International Food and Agribusiness Management Review*, 14(5), 109-123.
- Nonthaleerak, P., & Hendry, L. (2008). Exploring the six sigma phenomenon using multiple case study evidence. *International Journal of Operation & Production Management*, 28(3), 279-303.
- O'Reilly, C. A., & Chatman, J. A. (1986). Organizational commitment and psychological attachment: The effects of compliance, identification and internalization on prosocial behavior. *Journal of Applied Psychology*, 71, 492-499.
- Oates, C. (2007). *Traceability systems applied to FFV export chains in Thailand*. Paper presented at the Proceedings of the international symposium on fresh produce supply chain management, Chiang Mai, Thailand.
- Obeth, E. (2007). *Banana Supply Chain in Indonesia*. Master, University of Queensland, Brisbane.
- Obeth, E., & Dunne, T. (2008). The comparative performance of banana supply chains in East Kalimantan, Indonesia. *Acta Horticulturae*, 794, 277-284.
- Olsen, P. I., Prenkert, F., Hoholm, T., & Harrison, D. (2014). The dynamic of networked power in a concentrated business network. *Journal of Business Research*, 67(12), 2579-2589.
- Orlikowski, W. J., & Baroudi, J. J. (1991). Studying information technology in organizations: Research approaches and assumptions. *Information Systems Research*, 2(1), 1-28.
- Overby, E., Bharadwaj, A., & Sambumurthy, V. (2006). Enterprise agility and the enabling role of information technology. *European Journal of Information Systems*, 15(1), 120-131.
- Padgett, D. K. (2008). *Qualitative Methods in Social Work Research* (2nd ed.). Los Angeles: Sage Publications.
- Palmer, A. (2000). *Principles of Marketing*: Oxford University Press.
- Patton, M. Q. (1990). *Qualitative Evaluation and Research Methods* (2 ed.). Newbury Park, CA: Sage.
- Payan, J., & Svensson, G. (2007). Co-operation, coordination, and specific assets in inter-organisational relationships. *Journal of Marketing Management*, 23(7/8), 797.
- Payan, J. M., & McFarland, R. G. (2005). Decomposing influence strategies: argument structure and dependence as determinants of the effectiveness of influence strategies in gaining channel member compliance. *Journal of Marketing*, 69(July), 66-79.
- Pingali, P. (2007). Westernization of Asian diets and the transformation of food systems: Implications for research and policy. *Food Policy*, 32(3), 281-298.
- Porter, M. E. (1985). *Competitive Advantage*. New York: Free Press.
- Prater, E. (2005). A framework for understanding the interaction of uncertainty and information systems on supply chains. *International Journal of Operation & Production Management*, 21(5-6), 823-839.
- Pujawan, I. N. (2004). Assessing supply chain flexibility: a conceptual framework and case study. *International Journal of Integrated Supply Management*, 1(1), 79-97.
- Pye, L. W. (1992). *Chinese Negotiating Style*. Westport: Quorum Books.
- Ramasamy, B., Goh, K. W., & Yeung, M. C. H. (2006). Is Guanxi (relationship) a bridge to knowledge transfer? *Journal of Business Research*, 59(1), 130-139.
- Ramirez, R. (1999). Value co-production: INtellectual origins and implications for practice and research. *Strategic Management Journal*, 20, 49-65.
- Raspor, P. (2008). Total food chain safety: How good practices can contribute? *Trends in food science & technology*, 19(8), 405-124.

- Razdan, R., Das, M., & Sohoni, A. (2013). The evolving Indonesian consumer: Asia Consumer Insights Center.
- Reardon, T., & Berdegue, J. A. (2002). The rapid rise of supermarkets in Latin America: Challenges and opportunities for development. *Development Policy Review*, 20(4), 371-388.
- Redwood, S., Lloyd, H., Carr, E., & Hancock, H. (2007). Evaluating nurse consultants' work through key informant perceptions. *Nursing Standard*, 21(17), 35-40.
- Restrepo-Echavarria, P. (2014). Macroeconomic volatility: The role of the informal economy. *European Economic Review*, 70, 454-469.
- Ring, P. S., & Van de Ven, A. H. (1994). Developmental processes of cooperative interorganizational relationships. *The Academy of Management Review*, 19(1), 90-118.
- Roberts, N., & Grover, V. (2012). Investigating firm's customer agility and firm performance: The importance of aligning sense and respond capabilities. *Journal of Business Research*, 65(5), 579-585.
- Robson, C. (2002). *Real World Research: A Resources for Social Scientists and Practitioner-researchers* (2nd ed.). Oxford: Blackwell Publishing.
- Rodrigues, V. S., Santchev, D., Potter, A., Naim, M., & Whiteing, A. (2008). Establishing a transport operation focused uncertainty model for the supply chain *International Journal of Physical Distribution & Logistics Management*, 38(5), 388-411.
- Rossmann, G., & Rallis, S. (2003). *Learning in the Field: An Introduction to Qualitative Research* (2 ed.). Thousand Oaks, CA: Sage
- Samaha, S., Beck, J. T., & Palmatier, R. W. (2014). The role of culture in international relationship marketing. *Journal of Marketing*, 78(5), 78-98.
- Sambamurthy, V., Bharadwaj, A., & Grover, V. (2003). Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. *MIS Quarterly*, 27(2), 237-263.
- Sanzo, M. J., & Vázquez, R. (2011). The influence of customer relationship marketing strategies on supply chain partnership: The moderating effects of environmental uncertainty and competitive rivalry. *Journal of Business-to-Business*, 18(1), 50-82.
- Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students* (4th ed.). England: Pearson Education Limited.
- Sawhney, R. (2006). Interplay between uncertainty and flexibility across the value-chain: Towards a transformation model of manufacturing flexibility. *Journal of Operations Management*, 24(5), 476-493.
- Schatzman, L., & Strauss, A. L. (1973). *Field Research: Strategies for a Natural Sociology*. Englewood Cliffs, NJ: Prentice Hall.
- Schepis, D., Purchase, S., & Ellis, N. (2014). Network position and identity: A language-based perspective on strategizing. *Industrial Marketing Management*, 43, 582-59.
- Schneider, F. (2002). *Size and measurement of the informal economy in 110 countries*. Paper presented at the Workshop of Australian National Tax Centre, Canberra, Australia.
- Schultz, R. J., Evans, K. R., & Good, D. J. (1999). Intercultural interaction strategies and relationship selling in industrial markets. *Industrial Marketing Management*, 28(6), 589-599.
- Schwandt, T. A. (2006). *Dictionary of Qualitative Inquiry*. Thousand Oaks, CA: Sage.
- Sekaran, U. (2003). *Research Methods for Business: A Skill-building Approach*. New York: Wiley.
- Semangoen, H. (1971). *Penyakit-penyakit Tanaman Pertanian di Indonesia*. Yogyakarta: Jajasan Pembina Fakultas Pertanian, Universitas Gadjah Mada.
- Setia, P., Sambamurthy, V., & Closs, D. J. (2008). Realizing business value of agile IT applications: Antecedents in the supply chain networks. *Information Technology and Management*, 9(1), 5-19.

- Setyajit, Dimiyati, A., Lokollo, E. M., Kuntarsih, A., Basuki, R. S., Hidayat, A., . . . Woods, E. J. (2003). Analysis of the constraints to banana industry development in Indonesia using the supply chain concept. *ACIAR Proceedings*, 119, 59-68.
- Sharifi, H., & Zhang, Z. (2001). Agile manufacturing in practice; application of methodology. *International Journal of Operation & Production Management*, 21(5/6), 772-792.
- Sheffi, Y., & Rice Jr., J. B. (2005). A supply chain view of the resilient enterprise. *MIT Sloan Management Review*, 47(1), 41-48.
- Sheth, J. N. (1994). *The domain of relationship marketing*. Paper presented at the Conference on Relationship Marketing, Emory University, Atlanta, GA.
- Siggelkow, N. (2007). Persuasion with case studies. *Academy of Management Journal*, 50(1), 20-24.
- Singgih, S., & Woods, E. (2003). *Banana supply chains in Indonesia and Australia: Surviving isolation from end markets*. Paper presented at the International Farm Management Congress
- Singgih, S., & Woods, E. J. (2004). Banana supply chains in Indonesia and Australia: effects of culture on supply chains. *ACIAR Proceeding No. 119*, 44-52.
- Slater, S. F., & Narverq, J. C. (2000). Intelligence generation and superior customer value. *Journal of the Academy of Marketing Science*, 28(1), 120-127.
- Spekman, R. E., Kamauff, J. W., & Myhr, N. (1998). An empirical investigation into supply chain management: a perspective on partnership. *Supply Chain Management*, 3(2), 53-67.
- Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (3 ed.). Thousand Oaks, CA: Sage.
- Statistics-Indonesia. (2003). Sensus Pertanian 2003.
- Statistics-Indonesia. (2009). GDP by industrial origin at current market price, 2014 Retrieved 11th December 2014 <http://www.bps.go.id/eng/pdb.php>
- Statistics-Indonesia. (2012). Production of Fruits by Province (Ton), 2013. Retrieved 23rd June 2014 <http://www.bps.go.id/eng/index.php>
- Statistics-Indonesia. (2013a). *Agricultural indicators 2011/2012*.
- Statistics-Indonesia. (2013b). Sensus Pertanian 1-31 Mei 2013.
- Stolte, J. F., & Emerson, R. M. (1977). Structural inequality: Position and power in network structures. In R. Hamblin & J. Kunkel (Eds.), *Behavioral Theory in Sociology*. New Brunswick, N.J.: Transaction.
- Strauss, A., & Corbin, J. (1998). *Basic of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (2nd ed.). Thousand Oaks, CA: Sage.
- Strauss, A. L. (1987). *Qualitative Analysis for Social Scientists*. New York: Cambridge University Press.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and Institutional approaches. *Academy of Management Review*, 20, 571-610.
- Suryadarma, D., Poesoro, A., Budiayati, S., Akhmadi, & Rosfadhila, M. (2007). Impact of supermarkets on traditional and retailers in Indonesia's urban centers.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Thun, J.-H., Druke, M., & Hoening, D. (2011). Managing uncertainty - an empirical analysis of supply chain risk management in small and medium-sized enterprises. *International Journal of Production Research*, 49(18), 5511-5525.
- Tobin, G. A., & Begley, C. M. (2004). Methodological rigour within a qualitative framework. *Journal of Advanced Nursing*, 48(4), 388-396.
- Towill, D. R., & McCullen, P. (1999). The impact of agile manufacturing on supply chain dynamics. *The International Journal of Logistics Management*, 10(1), 83-96.
- Tsui, A. S., & Farh, J. L. (1997). Where Quanxi matters. *Work and Occupations*, 24(1), 56-79.

- Tukan, C. J. M., Roshetko, J. M., Budidarsono, S., & Manurung, G. S. (2006). Banana Market Chain Improvement - Enhance Farmers' Market Linkages in West Java, Indonesia. Retrieved 26 May 2014, from ICRAF Southeast Asia Publications.
- Utami, I. P. (2013). *Pembuatan Bioetanol dari Bonggol Pisang (musa paradisiaca l.) Dengan Hidrolisis Menggunakan Enzim Amilase dan Glukoamilase*. MIPA Faculty. University of Sebelas Maret, Indonesia.
- van der Vorst, J. G. A. J., & Beulen, A. J. M. (2002). Identifying sources of uncertainty to generate supply chain redesign strategies. *International Journal of Physical Distribution & Logistics Management*, 32(6), 409-430.
- van der Vorst, J. G. A. J., Dijk, S. J. v., & Beulens, A. J. M. (2001). Supply chain design in the food industry. *The International Journal of Logistics Management*, 12(2), 73-8
- van Donk, D. P., & Vaart, T. v. d. (2005). A case of shared resources, uncertainty and supply chain integration in the process industry. *International Journal of Production Economics*, 96(1), 97-108.
- van Hoek, R. I., Harrison, A., & Christopher, M. (2001). Measuring agile capabilities in the supply chain. *International Journal of Operation & Production Management*, 21(1-2), 126-147.
- Vargo, S. L. (2008). Customer integration and value creation. Paradigmatic traps and perspective. *Journal of Service Research*, 11(2), 211-215.
- Vargo, S. L., & Lusch, R. F. (2011). It's all B2B...and beyond: Toward a systems perspective of the market. *Industrial Marketing Management*, 40(2), 181-187.
- Vazquez-Bustelo, D., Avella, L., & Fernandez, E. (2007). Agility drivers, enablers and outcomes. Empirical test of an integrated agile manufacturing model. *International Journal of Operation & Production Management*, 27(12), 1303-1332.
- Velez, J. (2007). Consultancy on Banana Production and Post-Harvest Handling: Agribusiness Market and Support Activiy "AMARTA": Michigan State University.
- Vieira, L., Aguiar, L. K., & Maia, T. (2007). *Fair trade as product differentiation strategy for market access: An exploratory study of honey producers in Southern Brazil*. Paper presented at the Proceedings of the international symposium on fresh produce supply chain management, Chiang Mai, Thailand.
- Vinodh, S. (2010). Improvement of agility and sustainability: A case study in an Indian rotary switches manufacturing organisation. *Journal of Cleaner Production*, 18(10-11), 1015-1020.
- Wang, M.-C., & Fang, S.-C. (2012). The moderating effect of environmental uncertainty on the relationship between network structures and the innovative performance of a new venture. *Journal of Business & Industrial Marketing*, 27(4), 311-323.
- Webb, J. W., Tihanyi, L., Ireland, R. D., & Sirmon, D. G. (2009). You say illegal, I say legitimate: Entrepreneurship in the informal economy. *Academy of Management Review*, 34, 492-510.
- Weitzman, E. A. (2000). Software and qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 803-820). London: Sage Publications.
- Wilding, R. (1998). The supply chain compexity triangle. *International Journal of Physical Distribution & Logistics Management*, 28(8), 599-616.
- Willet, A. H. (1951). *The Economic Theory of Risk and Insurance*. Homewood, Illinois: Richard D. Irwin Inc.
- Williamson, O. E. (1983). Credible commitments: using hostages to support exchange. *American Economic Review*, 73, 519-540.
- Woods, E. J., Wei, S., Singgih, S., & Adar, D. (2000). Supply chain management as beyond oprational efficiency. *Acta Horticulturae*, 575(422-431).
- World Bank. (2007). *Horticultural Producers and Supermarket Development in Indonesia*. Jakarta.

- Yamagishi, T., Gillmore, M. R., & Cook, K. S. (1988). Network connections and the distribution of power in exchange networks. *American Journal of Sociology*, 93(4), 833-851.
- Yang, B., & Yang, Y. (2010). Postponement in supply chain risk management: A complexity perspective. *International Journal of Production Research*, 48(7), 1901-1912.
- Yang, C., & Liu, H.-M. (2012). Boosting firm performance via enterprise agility and network structure. *Management Decision*, 50(6), 1022-1044.
- Yeung, J. H. Y., Selen, W., Zhang, M., & Huo, B. (2009). The effects of trust and coercive power on supplier integration. *International Journal of Production Economics*, 120, 66-78.
- Yin, R. K. (2009). *Case Study Research: Design and Methods* (4 ed.). California: Sage Inc.
- Yunus, A. I. (2011). *Potret Kehidupan Sosial Ekonomi Pedagang Kaki Lima di Kota Makassar*. Universitas Hasanuddin, Makassar, Indonesia.
- Zhang, J., Li, Z., & Zou, J. (2013). The key points analysis of supply chain perspective of food quality and safety control. *Logistics Engineering and Management*, 10, 101-103.
- Zhang, Z., & Sharifi, H. (2000). A methodology for achieving agility in manufacturing organisations. *International Journal of Operation & Production Management*, 20(4), 496-512.
- Zuber-Skerritt, O. (1992). *Professional Development in Higher Education*. London: Kogan P

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APPENDIX

INTERVIEW SCHEDULE

A. Introduction

Initially, the researcher's task was to locate persons involved in the banana industry. Subsequently, each participant was asked whether or not a supplier and/or customer could be interviewed.

Only after a number of interviews did the concept of there being three dyads in the trade supply chain become evident. It appears that, rarely, there may be a case where a retailer buys directly from a collector, but the researcher had no specific experience of this situation.

Consequently, the basic interview schedule topics were related primarily to the buying and selling of bananas, with some material (marked 'F') added to enable farmers to comment on their role at the beginning of the process. Thus, the interview schedule was closely allied to the major themes from extant literature; viz., banana supply chain context, uncertainty, agility, relationships and performance.

Participants were invited to comment on how a topic applied to their work in the banana industry.

B. Schedule Topics

Participant's - Name

- Contact number

- Location

Section 1: Banana supply chain context

1. Ownership status –

2. Number of years in the industry -

3. Employees - sole trader

- number of employees

4. Average quantity of bananas bought/sold per month.

Variety of bananas	Buy	Sell
Cavendish		
Kepok		
Raja		
Ambon		
Barangan		
Susu		
Tanduk		
Other.....		
Other		

5. Number of persons supplying bananas to you.
6. Number of persons to whom you sell bananas.
7. Do you have a written contract agreement with – suppliers
- customers?
8. Do you have a verbal agreement?
9. How do you choose between different - suppliers
- customers?
10. With what type of business person do you want to work?
- suppliers
- customers
11. At first, who played the dominant role in your relationship
- with the supplier?
- with your customer?
12. In what ways did that the dominance show?

13. How did you comply with it?

14. Over the time you've worked together, how has the dominancy in the relationship changed?

15. What main communication device do you use to coordinate your business activities?

16. How often do you use it?

17. Who usually starts the communication?

18. What does supply chain coordination mean to you?

19. In what ways do you coordinate with your customer?

Section 2: Uncertainty

20. Are your buying and selling consistent all year round?

21. What is the main reason for the difference/variation between what you buy and/or what you sell?

22. How does the quantity of bananas produced change across the seasons (F)?

23. How would you rate the complexity of supply chain activities?

24. Comment on the level of variation in your supply chain activities

Quality of banana received and/or sold _____

Quantity of banana received and/or sold _____

Variance of lead-time _____

Price fluctuation _____

Customer/consumer demand _____

25. How do you cope with the uncertainty in the industry?

Section 3a Agility Drivers

26. How has the work changed in the last 3 years?
27. How important are product hygiene & food safety in the industry?
28. What do you do to improve hygiene & food safety in your supply chain?
29. How important is traceability to your business?
30. What makes traceability unimportant or important to you?
31. What does fair trade mean to you?
32. What does sustainability mean to you?
33. How important is sustainability to your business?
34. Who are your competitors?
35. Has the competition intensified over the last 3 years? If Yes, how?
36. How high is the competitiveness in this industry?

Section 3b Supply chain agility

37. What do you think your customer values the most?
38. What do you value the most from your supplier?
39. How have you modified/changed your system in some way to meet the needs of your -
preferred supplier
- preferred customer?
40. How do you rate your capability (capacity) to modify or innovate?
41. How high is your competitive pressure?

42. How do you rate your competitive ability?
43. How much attention do you pay to your competitors?
44. What are the future challenges you face in your industry over the next five years?
45. How significant do you believe they will be to your business over the next 5 years?

Section 4: Relational factors

46. What does business satisfaction mean to you?
47. Over your working time, how has your satisfaction of the relationship
- with your suppliers changed?
 - with your customers changed?
48. What critical incidents have decreased your satisfaction with the relationships?
49. How did you overcome them?
50. How do you cope with the unsatisfactory aspects of your relationships?
51. What does trust mean to you?
52. What made you initially trust
- your supplier
 - your customer?
53. As time has passed, has your trust in
- your supplier strengthened?
 - your customer strengthened?
54. How has your trust strengthened with
- your supplier?

- your customer?

55. What are the critical incidences that have weakened your trust in

- your supplier?

- your customer?

56. How did you manage (or not manage) to overcome the critical incidents?

57. What does commitment mean to you?

58. What things made you commit to this relationship with

- your supplier?

- your customer?

59. What things caused that commitment to change?

60. How often do you believe that you have been taken advantage of in some way

- by your supplier

- by your customer?

61. How did you find out that your supplier or customer was taking advantage of you?

62. How did you resolve it with your customer and/or your supplier?

63. How do you minimize the chance of your supplier or customer taking advantage of you?

Section 5: Performance

64. Please comment on your business performance (financial) in the last two years.

65. Please comment on your cost performance (decrease or increase) in the last 2 years.

66. Please comment on the overall quality of your performance.

67. Please comment the changes in productivity of your business in the last 2 years.

68. Please comment on your business performance compared to that of your main competitors

69. Please comment on your customer service performance compared to that of your main competitors.